

D E E D

KNOW ALL MEN BY THESE PRESENTS that the STATE OF OREGON, GRANTOR, acting by and through its State Board of Higher Education, for and in consideration of One Dollar (\$1.00) and other good and valuable considerations, receipt of all of which from the UNITED STATES OF AMERICA, GRANTEE, is hereby acknowledged, and for the purpose of confirming the right, title and interest of said GRANTEE in and to the property hereinafter described, has conveyed, granted, bargained and sold and does by these presents convey, grant, bargain and sell unto said UNITED STATES OF AMERICA, its successors and assigns, all of the following described property situated in the County of Multnomah, State of Oregon, and particularly described as follows, to wit:

Parcel 1

Beginning at the most easterly corner of a parcel of land deeded to Oregon Shipbuilding Corporation by Electro Metallurgical Company March 20, 1942 (recorded March 23, 1942 in Book 670, at page 432, Deed Records of Multnomah County, Oregon); said point being N 31°05'30" W, 30.2 feet from North Burgard monument Pt. 22-53, 86; thence N 28°19'30" W, 447.24 feet to an iron spike in pavement; thence N 34°19' E 21.00 feet to the true point of beginning of this parcel hereinafter referred to as Parcel 1; thence continuing N 34°19' E, 460.11 feet to an iron pipe; thence N 60°31'30" E, 119.18 feet to a point in the West Boundary of that parcel of land conveyed to Bonneville Administration by State of Oregon October 3, 1952 (recorded February 16, 1953 in Book 1584 at page 305, Deed Records of Multnomah County, Oregon); thence N 00°26'30" E, 616.39 feet to a point; thence N 80°35'45" W, 1219.55 feet to a point; thence S 00°21' W, 1227.20 feet to a point, said point being marked by a spike in pavement; thence S 88°19' E, 842.54 feet along the southerly boundary of 50 foot roadway described in Multnomah County Deed Book 800, page 245, Section A, Par. 3, to the true point of beginning of Parcel 1.

Parcel 2

Beginning at a point on the center line of N. Burgard Street (County Road 1397-60), known as Highway Engineer's Station 13-52.53, bearing S 22°40' E, 171.75 feet from Road Monument 15-24.28; thence N 89°50' W, 141.70 feet to a point on the curved southerly boundary line of N. Sever County Road 1379-A, which is the true point of beginning of this parcel, hereinafter referred to as Parcel 2; thence continuing N 89°50' W, 329.54 feet to an iron spike, which is the S.E. corner of a parcel of land sold to Beall Pipe and Tank Corporation by the State

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of Oregon April 28, 1953 under contract of sale; thence N 0°54' 1/2" W, 107.94 feet along the east boundary of the last mentioned parcel to a point; thence S 89°47' E, 117.53 feet to the west end of the south boundary of N. Sever Road, said point being an iron spike in the pavement normal to Highway Engineer's Station 17-19.02; thence along the south boundary line of said road as follows: on a tangent to the right of the last described course on a radius of 318.1 feet, a central angle of 27°21', and an arc length of 150.14 feet, to a point normal to Highway Engineer's Station 15-50; thence radially S 27°44' 1/2" W, 20 feet to a point, which is a nail driven into the pavement; thence left perpendicularly from the last described course, on a curve to the right, having a radius of 298.1 feet, a central angle of 18°12' 1/2", and an arc length of 94.73 feet, to the true point of beginning of Parcel 2.

AND ALSO, as appurtenant to the lands hereinabove described, the right, privilege and easement for a water pipeline, ten (10) feet in width, lying five (5) feet on either side of a centerline running on, over and through certain parcels of land owned by said STATE OF OREGON which are situated in Multnomah County, State of Oregon, described as follows:

(1.) Beginning at a point on the center line of N. Burgard Street (County Road 1397-60), known as Highway Engineer's Station 13-52.53, bearing S 22°40' E, 171.75 feet from Road Monument 15-24.28; thence N 89°50' W, 141.70 feet to a point on the curved southerly boundary line of N. Sever County Road 1379-A, which is the true point of beginning of this parcel; thence continuing N 89°50' W, 329.54 feet to an iron spike, which is S.E. corner of a parcel of land sold to Beall Pipe and Tank Corporation April 28, 1953; thence N 0°54' 1/2" W, 107.94 feet along the east boundary of said parcel to a point; thence S 89°47' E, 117.53 feet to the west end of the south boundary of N. Sever Road, said point being an iron spike in the pavement normal to Highway Engineer's Station 17-19.02; thence along the south boundary line of said road as follows: on a tangent to the right of the last described course on a radius of 318.1 feet, a central angle of 27°21', and an arc length of 150.14 feet, to a point normal to Highway Engineer's Station 15-50; thence radially, S 27°44' 1/2" W, 20 feet to a point, which is a nail driven into the pavement; thence left perpendicularly from the last described course, on a curve to the right, having a radius of 298.1 feet, a central angle of 18°12' 1/2", and an arc length of 94.73 feet, to the true point of beginning of this parcel;

(2.) Beginning at the most easterly corner of parcel deeded to Oregon Shipbuilding Corporation by Electro Metallurgical Company March 20, 1942 (recorded March 23, 1942 in Book 670 at page 432, Deed Records of Multnomah County, Oregon), said point being N 31°05'30" W, 30.2 feet from Highway Engineer's Station PT 22-53.86 on N. Burgard Road, which is

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monumented, said most easterly corner being the true point of beginning of this parcel; thence N 28°19'30" W, 447.24 feet to an iron spike in pavement; thence N 34°19' E, 21.00 feet to a point; thence N 88°19' E, 842.54 feet along the southern boundary of existing road; thence S 0°21' W, 1011.30 feet to a point; thence S 22°53'15" W, 18.04 feet to a point marked by a nail in the pavement which point is the north corner of a parcel sold by State of Oregon to William Shenker and Elizabeth Shenker April 28, 1953; thence S 60°09' E, 171.99 feet to a point; thence S 89°53' E, 274.95 feet to a point; thence S 0°51' 1/2' E, 4.03 feet to a point; thence S 89°47' E, 117.53 feet to a point which is marked by an iron spike which is the west end of the south boundary of N. Sever Road; thence N 0°13' E, 70 feet along the west end of said road to a point marked by a nail in pavement; thence following the north boundary line of N. Sever Road and the west boundary of N. Burgard Road, as follows: on a curve to the right, and normal to the last described course, with a radius of 388.1 feet, a central angle of 13°26', and an arc length of 91.1 feet; thence on a radial line to the left, N 13°39' E, 10 feet to a point; thence on a curve to the right, normal to the last described course, with a radius of 398.1 feet, a central angle of 36°, and an arc length of 250.1 feet to a point which point is the intersection of the north boundary of N. Sever Road with the west boundary of N. Burgard Road; thence N 22°40' W, 97.6 feet to a point normal to highway monument FC 15-24,28; thence on a curve to the right, tangent to the last described course, with a radius of 507.5 feet, a central angle of 87°12', and an arc length of 772.4 feet to the true point of beginning of this parcel; said line of easement being described as follows, to wit:

Beginning at a point N 79°00' W, 44.0 feet from the southeast corner of parcel (1,) described hereinabove, said beginning point of centerline of easement being on the west edge of pump house situated on said parcel and being 1.5 feet northerly from the southwest corner of said pump house; thence N 89°33' W, 40.66 feet; thence N 69°46' E, 491.28 feet; thence N 15°54' E, 224.34 feet; thence N 8°28' E, 195.45 feet; thence N 34°38' E, 55.13 feet; thence N 72°29' E, 69.80 feet; thence N 27°43' W, 300 feet more or less to a point thirty-five (35) feet westerly from the southeast corner of the following described parcel of land:

Beginning at the most easterly corner of parcel deed to Oregon Shipbuilding Corporation by Electro Metallurgical Company March 20, 1912 (recorded March 23, 1912 in Book 670 at page 432, Deed Records of Multnomah County, Oregon); said point being N 31°05'30" W, 30.2 feet from N. Burgard Monument PT 22-53.80; thence N 28°19'30" W, 447.24 feet to an iron spike in pavement; thence N 34°19' E, 21.00 feet to the true point of beginning of this parcel; thence continuing N 34°19' E, 460.11 feet to an iron pipe; thence N 60°11'30" E, 119.18 feet to a point in the west boundary of that parcel of land conveyed to Bonneville Administration by State of Oregon October 3, 1952 (recorded February 16, 1953, in Book 1584, page 305, Deed Records of Multnomah County, Oregon); thence N 0°26'30" E, (said bearing being designated and identical with line which

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is due north on Bonneville Drawing 20344) 616.39 feet to a point; thence N 80°35'45" W, 1219.55 feet to a point; thence S 0°21' W, 1227.20 feet to a point; said point being marked by a spike in pavement; thence S 88°19' E, 842.54 feet along the southerly boundary of 50 feet roadway described in Multnomah County Deed Book 800 at page 245, Sec. A, Par. 3, to the true point of beginning of this parcel.

In further consideration of said grant, the GRANTEE hereby agrees to bury said pipes at least three feet.

TOGETHER WITH, all and singular, the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issue and profits thereof; and also all of the estate, right, title, interest, property, possession, claim and demand whatsoever, at law as well as in equity, of the STATE OF OREGON, its successors and assigns, in, of or to said premises and every part and parcel thereof;

TO HAVE AND TO HOLD the foregoing described property together with all of the appurtenances thereunto belonging or in anywise appertaining unto the UNITED STATES OF AMERICA, its successors and assigns, for its own use and benefit forever.

IN WITNESS WHEREOF, the STATE OF OREGON has caused these presents to be executed as of this 27th day of April, 1954.

STATE OF OREGON,
Acting by and through the
State Board of Higher
Education

By H. R. E. Kleinsorge
President

By John L. Richards
Secretary

STATE OF OREGON }
County of Multnomah } ss.

On this 27th day of April, 1954,
before me appeared R. E. KLEINSORGE, to me personally known,
who being duly sworn did say that he, the said R. E. KLEINSORGE,
is the President of the Board of Higher Education for the
State of Oregon, and that he executed the foregoing Deed as
such President on behalf of said Board by authority of the
Board of Higher Education for the State of Oregon and said
R. E. KLEINSORGE acknowledged that he executed the same as
the free act and deed of said Board, for the State of Oregon.

IN TESTIMONY WHEREOF I have hereunto set my official
seal this the day and year first in this, my certificate,
written.

Ed Jean M. Oglesby
Notary Public for Oregon

(SEAL)

My commission expires: 7/9/56

STATE OF OREGON }
County of Multnomah } ss.

On this 27th day of April, 1954, before
me appeared JOHN R. RICHARDS, to me personally known, who
being duly sworn did say that he, the said JOHN R. RICHARDS,
is the Secretary of the Board of Higher Education for the
State of Oregon, and that he executed the foregoing Deed as
such Secretary on behalf of said Board by authority of the
Board of Higher Education for the State of Oregon and said
JOHN R. RICHARDS acknowledged that he executed the same as
the free act and deed of said Board, for the State of Oregon.

IN TESTIMONY WHEREOF, I have hereunto set my
official seal this the day and year first in this, my
certificate, written.

Ed Jean M. Oglesby
Notary Public for Oregon

(SEAL)

My commission expires: 7/9/56

GOVERNMENT-OWNER FACILITIES CONTRACT

THIS CONTRACT made and entered into as of the 11th day of January, 1941, by and between the UNITED STATES OF AMERICA (herein called "Owner"), represented by the UNITED STATES MARITIME COMMISSION (herein called the "Commission"), and OREGON SHIP-BUILDING CORPORATION, a corporation organized and existing under the laws of the State of Delaware (herein called the "Contractor");

W I T N E S S E T H:

WHEREAS:

1. Pursuant to the provisions of Section 5 of the Act approved July 2, 1940 (Public No. 703, 76th Congress), and of Section 1 of the "Military Appropriations Act, 1941," approved June 13, 1940 (Public No. 611, 76th Congress), the President is authorized, through appropriate agencies of the Government, without reference to Section 5709, Revised Statutes, to provide for emergencies affecting the national security and defense, and to provide for the furnishing of Government-owned facilities at privately-owned plants;

2. Pursuant to the authority contained in said Military Appropriations Act, 1941, the President has requested the United States Maritime Commission to provide and construct necessary shipyard facilities for the construction and equipment of vessels of the type and in the quantities desired by the Owner;

3. The Contractor proposes to lease from the owner or owners thereof, under a lease satisfactory in form and substance to the Commission, a certain tract of land situated at Portland, Oregon, and more fully described as follows:

- (a) A parcel of property, containing approximately 94 acres, lying northerly and easterly of Pier No. 1 of Municipal Terminal No. 4 in the City of Portland, Oregon, and extending along the Willamette River harbor line for a distance of approximately 1455.58 feet and easterly 3464.15 feet, the northerly line of the property being approximately parallel to Pier No. 1 of said Municipal Terminal No. 4; and

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- (b) Slip No. 2 of said Municipal Terminal No. 4, together with an area on the adjoining Piers Nos. 3 and 4, approximately 120 feet in width and paralleling said Slip No. 2, together with an area 80 feet in depth from the sliphead;

and to acquire, by purchase or lease or otherwise, such additional lands, or interests in land, as may be necessary for the construction and operation of the Facilities. Said tract of land, together with any other land which the Contractor may acquire, or in which the Contractor may acquire any interest, in connection with the construction and operation of the Facilities, or which may be necessary for such construction or operation, is herein called the "Real Estate".

4. The Owner may desire the Contractor to build vessels at said plant and, in order to build such vessels, it will be necessary for the Owner to provide certain facilities, including the shipbuilding ways, buildings and appurtenances hereinafter referred to; and

5. In view of the Owner's urgent requirements for additional vessels, the Contractor is willing to furnish and install the facilities hereinafter referred to under the terms and conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the premises, the sum of Two Dollars (\$2.00) duly paid by the Owner to the Contractor, the mutual covenants, agreements, and conditions hereinafter contained, and for other valuable considerations, the parties hereto do hereby mutually agree as follows:

Statement
of work.

ARTICLE 1: Statement of Work. The Contractor shall, in the shortest time possible, subject to the terms and conditions of this contract, furnish all labor, materials, supplies, and equipment, not furnished by the Owner, required to design, construct, equip, and complete the buildings, utilities, facilities, and appurtenances thereto, identified in Exhibit I attached to and forming a part of

this contract and hereinafter sometimes collectively referred to as the "Facilities," on the Real Estate.

The work shall be executed in the best and most workmanlike manner by qualified, careful and efficient workers, in strict conformity with the best standard practices and in strict accordance with the approved plans and specifications referred to in Article 2 hereof.

Approval of
Plans and
Specifications.

ARTICLE 2: Plans and Specifications. The Contractor shall, as soon as practicable after the date hereof, prepare and submit for approval by the Commission, or its duly authorized representative, detail plans and specifications covering all the Facilities, together with a schedule showing the maximum total estimated cost thereof and a complete breakdown of such cost. After approval of such plans and specifications and estimates, the Contractor shall promptly proceed to acquire and assemble the necessary materials and equipment required to erect, furnish, or install the Facilities in accordance with said approved plans and specifications, and shall diligently prosecute to completion the work of construction, erection, and installation of such item. Wherever practicable, the Contractor shall obtain from responsible firms or individuals competent to furnish the materials or equipment, or to undertake the work involved or any part thereof, competitive bids for all materials, equipment, or services required, and shall award orders therefor to the lowest satisfactory bidders; provided that, as a condition precedent to the award of any order hereunder, it shall obtain the approval of the Commission or its duly authorized representative. There shall be no mingling of purchases covering materials or services required under this contract and those required by the Contractor for other work.

Inspection.

ARTICLE 3: Inspection. All materials and workmanship furnished in the performance of this contract may, at the option of

the Owner, be subject to inspection and test by the Owner, or, with the approval of the Owner, to inspection and test by the Contractor, at any and all times during the manufacture or construction and at any and all places where such manufacture or construction is carried on. The Owner shall have the right to reject materials and workmanship determined to be defective, and require correction or replacement thereof, at no expense to the Owner, if avoidable by due and reasonable diligence of the Contractor.

Changes.

ARTICLE 4: Changes. The Owner or its duly authorized representatives may, by written order, approve changes in or additions to the items identified in said Exhibit I.

Cost to be
Paid to
Contractor.

ARTICLE 5: Determination of Costs. The complete cost to be paid by the Owner to the Contractor shall be determined by the Commission and its decision shall be final and binding on the parties hereto. Such cost shall be determined in accordance with the rules and regulations for determining costs issued by the Commission and entitled "Regulations Prescribing the Method of Determining Profit, Adopted May 4, 1939," as amended, insofar as applicable, and (insofar as the same are not applicable) in accordance with sound accounting practice. There shall be included (but without limitation), in determining such cost, the following items:

(a) MATERIALS:

The actual net cost after deducting all discounts, refunds, allowances, and price adjustments of all materials required and purchased under subcontracts or furnished by the Contractor which shall become a component part of the facilities or are required for temporary equipment, field office buildings, structures, trackage, and the like or for maintenance or operation of tools and equipment and including the cost of dredging, excavating and filling.

(b) LABOR:

The cost of labor used in clearing and preparation of the site, the processing of materials for and the construction of the facilities, and the maintenance and operation of tools and equipment.

(c) SALARIES:

Salaries and wages of engineers, draftsmen, supervisors, storekeepers, clerks, watchmen, laborers, and other employees on the project payroll engaged in the construction of the facilities and other duties incident thereto.

(d) PROFESSIONAL SERVICE, PLANS AND SPECIFICATIONS:

The actual net cost of necessary engineering services, plans, and specifications, bills of material, estimates, etc. purchased by the Contractor; and legal and accounting fees specifically approved by the Commission.

(e) SUPPLIES:

The actual net cost of supplies purchased or furnished by the Contractor and used in the construction of the facilities or for the maintenance and operation of tools and equipment during the course of construction of the facilities.

(f) RENTAL:

Reasonable rentals or service charges for periods required for equipment, including such equipment owned by the Contractor, the equipment to be in good working order before rental periods begin, and including rental arising out of leased real estate on which the facilities are installed and specifically approved by the Commission. The rental or service charge for a particular piece of equipment shall not exceed the cost of such equipment. Whenever the aggregate rental paid for any item of equipment equals the replacement value (at the beginning of the rental

period) of such item of equipment, such equipment shall become the property of the Owner.

(g) MISCELLANEOUS EXPENSE:

The actual net cost of fuel, power, water, stationery, telephone, telegraph, reasonable traveling and transportation expense of employees, freight, express, trucking, unloading and handling costs, permits, licenses, Federal and State Social Security payments; premiums for compensation, public liability, fire and other necessary insurance and bonds, and the actual net cost of reconstructing or replacing any work destroyed or damaged and not covered by insurance.

(h) TAXES:

State, City, and County taxes assessed against the land upon which the facilities are being constructed and referable to the period of the construction and payable by the Contractor.

(i) INTEREST:

Actual interest paid or accrued for payment (not in excess of prevailing rates for loans to preferred borrowers from disinterested parties) on loans incurred solely for the purpose of performing this contract and for the construction period thereof.

(j) GENERAL, ADMINISTRATIVE, AND OPERATING EXPENSE:

A reasonable allowance of the Contractor's general, administrative, and operating expense incident to the performance of this contract.

(k) SCRAP AND EXCESS MATERIALS:

There shall be deducted from the cost of the facilities, a reasonable value for scrap and materials determined to be in excess of the actual requirements and not incorporated in the facilities; credit for such scrap or excess materials to be at the prices obtained when sold or at current market prices

if taken over by the Contractor or held for resale beyond the construction period of the contract; Provided, That in determining cost hereunder there shall be excluded from such cost (i) the exclusions required by the Regulations above referred to, (ii) any expenses, including (but without limitation) traveling expenses, deemed by the Commission to be excessive, (iii) all salaries or compensation (excluding professional fees) in any form in excess of a rate of \$25,000 per annum, (iv) depreciation on the Facilities and (v) charges for remedying work and replacing materials which are defective if avoidable by due and reasonable diligence of the Contractor.

All costs shall be scrutinized to determine that they are fair, just, and not in excess of a reasonable market price for the commodities or goods or services purchased or charged.

Records, Accounts, Inspection, Audit.

ARTICLE 6: Records and Accounts - Inspection and Audit.

(a) The Contractor agrees to keep records and books of account on a recognized cost accounting basis satisfactory to the Commission, showing the actual cost to him of all items of labor, materials, equipment, supplies, services and other expenditures of whatever nature for which reimbursement is authorized under the provisions of this contract. Statements and returns relative to expenditures shall be made as and when directed by the Commission.

(b) The Commission shall at all times be afforded proper facilities for inspection of the work and shall at all times have access to the premises, work and materials, to all books, records, correspondence, instructions, plans, drawings, receipts, vouchers and memoranda of every description of the Contractor pertaining to said work and all the books, records and other papers herein mentioned shall be the property of the Commission and shall be surrendered to it by the Contractor

upon the completion of this contract and upon delivery of a release to the Contractor by the Commission.

(c) Any duly authorized representative of the Contractor shall be accorded the privilege of examining the books, records and papers of the Commission relating to the cost of the work for the purpose of checking up and verifying such cost. All information obtained by the Commission from the Contractor's accounts and records shall be treated as confidential.

Payments.

ARTICLE 7: Payments. (a) The Contractor shall be paid, as full compensation under this contract, the complete cost of performance thereof, and no more (it being intended that the work shall be performed by the Contractor at cost and without profit) said cost being determined in the manner provided in Article 5 hereof; Provided, That in no event shall the amount payable under this contract (including payments to be made by the Commission under the succeeding Articles hereof) exceed \$4,787,000, unless the Commission shall determine that the cost of the Facilities will be in excess of such amount and agree by notice in writing to the Contractor, to pay such increased cost: Provided further, That the Contractor shall not be deemed to have guaranteed that the Facilities can be constructed for said amount and shall in no event be obligated to perform work at a cost in excess of the amount payable by the Owner hereunder.

(b) The Owner will make semi-monthly payments for the Facilities to be constructed and furnished in accordance with this contract, as soon as practicable after receipt of certified bills to cover costs (but in any event within 15 days after receipt of such certified bills) paid by the Contractor prior to the submission of such certified bills, and

evidence satisfactory to the Commission of the payment by the Contractor of such costs, provided that payments shall be made more frequently and at any time upon submission by the Contractor of certified bills (not made the basis of prior payment), with evidence of payment, in an amount in excess of \$300,000.

(c) Upon completion of the erection, furnishing, or installation of the Facilities, final payment of the balance due to the Contractor hereunder shall be paid. With its application for such balance due, the Contractor shall submit a release in such form and containing such provisions as shall be approved by the Commission.

(d) When payment is to be made hereunder, the Commission, as a condition precedent to making such payments, may, in its discretion, require that affidavits satisfactory to it be furnished by the Contractor showing what, if any, liens or rights in rem of any kind against such Facilities or the materials or equipment on hand for use in the construction thereof have been or can be acquired for or on account of any work done, or any materials or equipment already incorporated as a part of the Facilities, or on hand for that purpose; but it is hereby further stipulated, covenanted, and agreed by the Contractor, for itself and on its own account and for and on account of all persons, firms, associations, or corporations furnishing labor and/or material for the Facilities, and this contract is upon the express condition that no liens or rights in rem of any kind shall lie or attach upon or against the Facilities, or materials or equipment therefor, or any part thereof, or of either, for or on account of any work done upon or about such Facilities, or of any materials or equipment furnished therefor or in connection therewith,

or for or on account of any other cause or thing, or of any claims or demands of any kind, except the claims of the Commission: Provided, however, That in case by reason of the laws of any State, the Contractor shall be unable to comply with such express condition, the Commission may waive such condition or take such other action as it may deem proper under the circumstances.

Title to
Facilities,
etc.

ARTICLE 8: Title to Facilities. Title to the Facilities, even though said Facilities are affixed to realty belonging to or leased by the Contractor, completed or in the course of construction, shall be in the Owner. In the event title to any materials, tools, machinery, equipment, and supplies purchased to become a part of said Facilities is transferred from the vendor, subcontractor, or supplier prior to delivery at the site or an approved storage site, such title shall, upon such transfer, vest in the Owner. Title to any materials, machinery, or equipment ordered from any subcontractor, to the extent the Owner or Contractor makes payment therefor, even though such subcontractor has not made delivery thereof at the site of the Facilities, nor completed the work required of him with respect thereto shall also vest in the Owner. These provisions as to title being vested in the Owner shall not operate to relieve the Contractor from any duties imposed under the terms of this contract.

The Facilities shall be positively and adequately identified. The Contractor shall record the interest of the Owner, as may be required by the Commission, in the Facilities, materials, tools, machinery, equipment, and supplies, and shall take all necessary steps to give to third parties notice of such interest. The Contractor will

also, upon request of the Commission, execute and deliver to the Commission, such deeds, bills of sale or other instruments as the Commission may deem necessary to transfer or confirm to the Owner title to all such property or any other rights of the Commission or Owner hereunder in respect of the Facilities or the Real Estate.

Operation,
Maintenance,
Protection.

ARTICLE 9: Operation, Maintenance and Protection. The Contractor shall have the exclusive right, subject always to the provisions of Article 23 hereof, until June 30, 1942, and thereafter until completion of any vessels which the Contractor shall theretofore have contracted to build for the Owner or the Commission, to operate the Facilities: Provided, That the Contractor shall use and operate the Facilities and the Real Estate solely for the construction of vessels for the Owner, and shall not use the same, or any part thereof, or enter into any contracts with any other person for use of the same, or any part thereof, for any other purpose whatsoever, without the prior written approval of the Commission: Provided, further, that in the event that the Owner or the Commission shall, after the Owner shall have been authorized to enter into contracts for the construction of vessels at the site of the Facilities (or of other facilities constructed pursuant to the authority referred to in Section 1 of the preambles hereto) have offered to enter into a contract with the Contractor for the construction of vessels of the type proposed to be constructed at the site of the Facilities on terms comparable to the terms offered other contractors constructing similar facilities pursuant to the authority referred to in Section 1 of the preambles hereto, and the Contractor shall not have accepted such contract within 15 days after the same shall be tendered by the Commission, the Commission or the Owner shall have the right, at its option, on 15 days' notice to the Contractor, and upon payment of a reasonable fee (determined as herein provided) to the Contractor for construction of the Facilities, to take over and operate the Facilities and the Real Estate, and to use and operate the same either directly or by lease

(or sub-lease) or in such other manner as the Owner or Commission may deem desirable. The amount of the fee to be paid the Contractor for construction of the Facilities, in case the Commission or the Owner shall exercise such option, shall be determined by agreement between the parties, or in the event that the parties shall not agree as to such amount, then an amount to be determined by three arbitrators, one to be chosen by the Commission, one by the Contractor and the third to be elected by the two arbitrators so chosen.

The operation of the Facilities by the Contractor shall be without compensation for its services, except as may be provided by other agreement. Should there be an interval of time between the completion of the Facilities and the award of a contract by the Owner to the Contractor for the construction of vessels at the site of the Facilities the Owner will pay to the Contractor reasonable compensation for the use of the property of the Contractor occupied or required by the Facilities and for the cost of care and preservation thereof until the award of any such contract or until the Owner shall take over the Real Estate and Facilities or cancel the contract. During the entire period in which the Contractor shall operate the Facilities, the Contractor will keep them insured against damage and provide all reasonable protection and maintain them in good working order and condition, ordinary wear and tear excepted.

If the Owner or the Commission shall not have theretofore taken over the Real Estate and Facilities for operation as otherwise provided in this contract, then, at any time after June 30, 1942, or the completion of all vessels which the Contractor shall, on or before June 30, 1942, have contracted to build for the Owner or the Commission at the site of Facilities (whichever is later), in the event that the Owner or the Commission shall offer to enter into a contract with the Contractor for construction of vessels on terms comparable to the terms offered at that time to other contractors using Facilities constructed under the authority referred to in Section 1 of the preambles hereof, and the

Contractor shall not have accepted such contract within 15 days after the same shall be tendered by the Commission, the Commission or the Owner shall have the right, at its option, on 15 days' notice to the Contractor, (and without payment of any fees to the Contractor for the construction of the Facilities) to take over and operate the Facilities and Real Estate and to use and operate the same, either directly or by lease (or sub-lease) or in such other manner as the Commission or the Owner may deem desirable.

Suspension,
Cancellation.

ARTICLE 10: Suspension and Cancellation. This contract may at any time be suspended or cancelled, as to all or any part of the Facilities, by the Commission, upon not less than 5 days' notice in writing to the Contractor, with the effect as hereinafter described:

(a) In case the construction and installation of the Facilities are suspended, the Contractor, on the date specified in such notice in writing, shall promptly stop all work in connection therewith, except as otherwise directed in writing by the Commission, and during the period of such suspension shall care for the Facilities and all materials and equipment on hand for the construction thereof. The Contractor shall also promptly furnish to the Commission copies of all outstanding orders for materials, equipment, and services, and shall take such action relative to such orders as may be directed by the Commission. If such construction and installation are thus suspended, the Contractor will be entitled to be reimbursed for all additional expense, as determined by the Commission, incurred by reason of such suspension. This additional expense shall include (i) the cost of any special work directed by the Commission; (ii) the cost of care and preservation of the Facilities, materials, and equipment during the period of suspension; (iii) any additional payments for which the Contractor is liable by reason of the suspension or cancellation of orders for material or work that may be directed by the Commission; (iv) the increased cost, if any, due to resumption

of work after its suspension; and (v) any other reasonable expense the Contractor shall have incurred on account of the suspension.

(b) In case this contract is cancelled by the Commission, the Contractor shall, on the date specified in the notice in writing of such cancellation, stop all work in connection with the construction of Facilities, except as otherwise directed by the Commission. If this contract is thus cancelled, the Contractor will be entitled to payment for all work done to the effective date of cancellation and to reimbursement for all additional expense, as determined by the Commission, incurred by reason of such cancellation. This additional expense shall include (i) the cost of any work directed by the Commission; (ii) the cost of care and preservation of the Facilities, materials, and equipment prior to removal or disposition thereof as directed by the Commission; (iii) any other reasonable expense, including subcontractors' cancellation charges and reasonable compensation for the use of the property of the Contractor occupied or required by the Facilities, materials, and equipment until final disposition thereof, as determined by the Commission.

(c) The increased compensation to which the Contractor will be entitled by reason of the suspension or cancellation of this contract as herein provided, will be determined by the Commission as soon as practicable after the suspension or cancellation is ordered. The amounts so determined by the Commission shall be the amounts to which the Contractor will be entitled in full settlement of the cost of such suspension or cancellation.

Maintenance
Agreement.

ARTICLE 11: Maintenance Agreement. If there shall be an interval of time between the completion of the construction of

the last vessel awarded to the Contractor to be constructed at the site of said Facilities and final disposition of the Facilities, the Commission shall enter into an agreement with the Contractor to provide for the preservation, maintenance, and protection of the Facilities.

Preservation of
Facilities
for National
Defense.

ARTICLE 12: Preservation of Facilities for National Defense. The Contractor hereby grants to the Owner an option to be exercised, by notice in writing from the Commission delivered or mailed to the Contractor within 90 days after the date of the acceptance of the last of the vessels awarded or to be awarded to the Contractor for construction at the site of the Facilities or after the cancellation of the contracts therefor, to require the Contractor to maintain and preserve the Facilities in such state of repair as to insure full availability and usefulness for national defense purposes at any and all times during a period of not to exceed 2 years after the exercise of such option: Provided, that payment of the cost of the maintenance and preservation thereof and of other related expenses shall be provided for by subsequent agreement, and provided further, that during such 90-day period the Commission shall have full access to such Facilities for the necessary protection of the Government's interest therein.

Final Dis-
position of
Facilities.

ARTICLE 13: Final Disposition of Facilities. (a) Upon the determination by the Commission that the Facilities are no longer necessary for the purpose of the national defense, or (b) upon the expiration of the option referred to in Article 12 hereof if the Commission shall not exercise the same within the period referred to in said Article 12, or (c) upon the expiration of the period during which the Contractor shall have been obligated to maintain and preserve the Facilities covered by this contract, if the Commission shall exercise such option, whichever of said events shall first occur, the Facilities shall be disposed of in

accordance with the provisions of this Article. In such event, the Commission will make a final inventory of the Facilities and determine the fair value thereof. For the purposes of such inventory and determination, the Facilities shall be classified as follows: (i) those Facilities which are readily removable; and (ii) those Facilities which are not readily removable. The Commission will furnish the Contractor with copies of the inventory and of the appraisal. If it is mutually agreed that the Contractor purchase the Facilities, or any part thereof, from the Owner, it shall pay to the Owner an amount agreed upon under such terms and conditions as shall be prescribed by the Commission; but, if such an agreement cannot be reached, the Commission may and, if required by the Contractor to do so, shall immediately enter upon the Real Estate of the Contractor and within 90 days thereafter demolish or remove any Facilities installed thereon not so purchased by the Contractor: Provided, That the Real Estate on which shall be located the Facilities or such thereof as shall be demolished or removed shall be restored so as to leave the same in as good condition as immediately prior to the acquisition, construction, or installation of the Facilities thereon: Provided further, that should the Commission deem it to be in the public interest such Government owned Facilities, or any portion thereof, may, in lieu of their demolition or removal, be leased to the Contractor upon terms to be mutually agreed upon.

Patents.

ARTICLE 14: Patents. The Contractor shall hold and save the Owner, its officers, agents, servants and employees harmless from liability of any nature or kind, including costs and expenses, for or on account of the use or manufacture of any patented or unpatented invention, article, or appliance manufactured or used in the performance of this contract, including their use by or for the Government after installation: Provided however, That this requirement shall not be construed to extend to anything supplied by the Owner.

Eight-Hour
Law - Overtime
Compensation.

ARTICLE 15. Eight-Hour Law - Overtime Compensation. No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the Contractor or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work at the site thereof, except upon the condition that compensation is paid to such laborer or mechanic in accordance with the provisions of this article. The wages of every laborer and mechanic employed by the Contractor or any subcontractor engaged in the performance of this contract shall be computed on a basic day rate of eight hours per day and work in excess of eight hours per day is permitted only upon the condition that every such laborer and mechanic shall be compensated for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. For each violation of the requirements of this article a penalty of \$5.00 shall be imposed upon the Contractor for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work without receiving compensation computed in accordance with this article, and all penalties thus imposed shall be withheld for the use and benefit of the Government; Provided, That this stipulation shall be subject in all respects to the exceptions and provisions of U. S. Code, Title 40, Sections 321, 324, 325, and 326, relating to hours of labor, as in part modified by the provisions of Section 303 of Public Act No. 781, 76th Congress, approved September 9, 1940, relating to compensation for overtime.

Convict
Labor.

ARTICLE 16. Convict Labor. Neither the Contractor nor any subcontractor hereunder shall employ upon the work covered by this contract any person undergoing sentence of imprisonment at hard labor.

Labor
Statistics.

ARTICLE 17. Labor Statistics. The Contractor will report

monthly, and will, by agreement, require its subcontractors to report in like manner within 5 days after the close of each calendar month, on forms to be furnished by the United States Department of Labor, (1) the number of persons on their respective pay rolls, (2) the aggregate amount of such pay rolls, (3) the man-hours worked, and (4) the total expenditures for materials. The Contractor shall, at the earliest date practicable, furnish to the Department of Labor the names and addresses of all subcontractors on the work, Provided, however, That the requirements of this paragraph shall be applicable only to work done at the site of the construction project.

Affidavit
concerning
rates of pay
for labor.

(b) Pursuant to the provisions of the Act approved June 13, 1934 (40 U.S.C. 276 (b) and (c)), concerning rates of pay for labor, the Secretary of the Treasury and the Secretary of the Interior hereby jointly promulgate the following regulations (amended March 29, 1937):

Section 1. Said act reads as follows:

"To effectuate the purpose of certain statutes concerning rates of pay for labor, by making it unlawful to prevent anyone from receiving the compensation contracted for thereunder, and for other purposes.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that whoever shall induce any person employed in the construction, prosecution, or completion of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, or in the repair thereof, to give up any part of the compensation to which he is entitled under his contract of employment, by force, intimidation, threat of procuring dismissal from such employment, or by any other manner whatsoever, shall be fined not more than \$5,000, or imprisoned not more than five years, or both.

"Sec. 2. To aid in the enforcement of the above section, the Secretary of the Treasury and the Secretary of the Interior jointly shall make reasonable regulations for contractors or subcontractors on any such building or work, including a provision that each contractor and subcontractor shall furnish weekly a sworn affidavit with

respect to the wages paid each employee during the preceding week.
Said affidavit shall be in the following form:
State of-----,

County of-----, ss:

I ----- (name of party signing affidavit)
----- (title) do hereby certify that I am the employee of
----- (name of contractor or subcontractor) who supervised
the payment of the employees of said contractor (subcontractor): That
the attached payroll is a true and accurate report of the full weekly
wages due and paid to each person employed by the said contractor
(subcontractor) for the construction of ----- (project),
for the weekly pay-roll period from the ----- day of ----- 1941-,
to the ----- day of ----- 194-; that no rebates or reductions
from any wages due any such person as set out on the attached pay roll
have been directly or indirectly made; and that, to the best of my knowl-
edge and belief, there exists no agreement or understanding with any
person employed on the project, or any person whatsoever, pursuant to
which it is contemplated that I or anyone else shall directly or indi-
rectly, by force, intimidation, threat, or otherwise, induce or receive
any deductions or rebates in any manner whatsoever from any sum paid or
to be paid to any person at any time for labor performed or to be per-
formed under the contract for the above-named project.

Sworn to before me this-----day of-----194--

Sec. 3. Said affidavit shall be executed and sworn to by the
officer or employee of the contractor or subcontractor who supervises
the payment of its employees.

Said affidavit shall be delivered, within 7 days after the payment
of the pay roll to which it is attached, to the Government representative
in charge at the site of the particular project in respect of which it
is furnished, who shall forward the same promptly to the Federal agency
having control of such project. If no Government representative is in
charge at the site, such affidavit shall be mailed within such 7-day
period to the Federal Agency having control of the project.

Sec. 4. At the time upon which the first affidavit with respect to
the wages paid to employees is required to be filed by a contractor or
subcontractor pursuant to the requirements of these regulations, there
shall also be filed in the manner required by Section 3 hereof a state-
ment under oath by the contractor or subcontractor, setting forth the
name of its officer or employee who supervises the payment of employees,
and that such officer or employee is in a position to have full knowledge
of the facts set forth in the form of affidavit required by section 2
hereof. A similar affidavit shall be immediately filed in the event
of a change in the officer or employee who supervises the payment of
employees. In the event that the contractor or subcontractor is a cor-
poration, such affidavit shall be executed by a member of the firm.

(c) This contract is subject to the provisions of the Act of June
25, 1936 (40 U. S. C. 290), entitled "An Act to provide more adequate
protection to workmen and laborers on projects, buildings, constructions,
improvements, and property wherever situated, belonging to the United
States of America, by granting to the several States jurisdiction and
authority to apply their State workmen's compensation laws on all
property and premises belonging to the United States of America."

Domestic
preference.

ARTICLE 18. Domestic Preference. In the performance of the work covered by the contract the Contractor, subcontractors, material men, or suppliers shall use only such unmanufactured articles, materials, and supplies, as have been mined or produced in the United States, and only such manufactured articles, materials, and supplies as have been manufactured in the United States substantially all from articles, materials, or supplies mined, produced, or manufactured, as the case may be, in the United States; the foregoing provision shall not apply to such articles, materials, or supplies of the class or kind to be used or such articles, materials, or supplies from which they are manufactured, as are not mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, or to such articles, materials, or supplies as may be expected by the head of the Department under the proviso of Title III, section 2, of the Act of Congress approved March 3, 1933 (41 U.S.C. 10).

Not
transferable.

ARTICLE 19. Not transferable. This contract shall not, nor shall any interest therein, be transferred by the Contractor to any other person or persons.

Covenant
against
contingent
fees.

ARTICLE 20. Contingent fees. The Contractor warrants that he has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Owner the right to terminate the contract, or, in its discretion, to deduct from the contract price or consideration the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by Contractors upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for the purposes of securing business.

Officials
not to
benefit.

ARTICLE 21. Officials not to benefit. No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

Disputes.

ARTICLE 22. Disputes. Except as otherwise specifically provided in this contract, if any doubts or disputes arise concerning any question hereunder or as to anything in the plans or specifications, or if any discrepancy appears between said plans or specifications and this contract, the matter shall be referred at once to the United States Maritime Commission for determination; and its decision in the premises shall be conclusive and binding upon the parties hereto.

Events of
Default.

ARTICLE 23: Events of Default. In case any of the following events (herein called "events of default") shall occur, that is to say, in case

(a) The Contractor shall fail in any respect to use reasonable diligence in proceeding with the performance of the work required hereunder, or shall fail to faithfully perform any of the covenants on its part to be performed hereunder, or under any contract with the Owner or the Commission for the construction of vessels or other use of the Facilities, or under any lease or other agreement with respect to the Real Estate, or any part thereof, and such default shall continue for a period of 15 days after written notice from the Commission to cure such default (or for such shorter period as may be necessary in order to avoid such a completed default as may permit the owners or lessors of the Real Estate to terminate the rights of the Contractor under such lease or other agreement); or

(b) There shall be suspension of work (as herein-after defined) for a period of 15 days without the written consent of the Commission and under circumstances not justified under the provisions of this contract; or

(c) The Contractor shall file a petition in bankruptcy or for reorganization under the Bankruptcy Act, or an order shall be entered on petition against the Contractor adjudicating the Contractor a bankrupt or approving the filing of a petition under the Bankruptcy Act, or a receiver or receivers of the Contractor, or any substantial part of its property used or to be used in the performance of the work under this contract shall be appointed, or the Contractor shall make a general assignment for the benefit of creditors; or

(d) Any other event not contemplated by this contract shall occur which in the opinion of the Commission would make it impossible for the Contractor to carry out its obligations under this contract;

then, and in any such event, the Commission, if it shall deem it advisable, may, directly or by its agents or attorneys or independent contractors, enter into and upon and take possession of the Real Estate, and each and every part thereof, and may take possession and custody of the Facilities and may exclude the Contractor and its agents and servants wholly therefrom, and, having and holding of the same, may use, operate, manage, and control the Real Estate and the Facilities and exercise all rights and powers of the Contractor with respect thereto including any and all rights of the Contractor under any leases or other agreements with respect to the Real Estate in the name of the Contractor or the Commission, or otherwise as it shall deem best, either personally or by its superintendents, agents, servants, attorneys, receivers, or independent contractors; and may use and operate the same directly or by lease (or sub-lease), or in such other manner as the Commission may deem desirable.

The term "suspension of work" as used in this Article 23 shall mean and include any reduction of the number of workmen working on the Facilities to a number less than one-half the number who continuously and properly should be employed and at work on the Facilities at their then stage of construction. Whether the work has stopped for a period of 15 days, as contemplated by this Article, may be determined on the basis of the average of the workmen employed on the Facilities through that period. In case of disagreement, the number of workmen who should have been employed at the time when it is claimed the Contractor stopped work under the provisions of this paragraph, and the number who should have been employed from time to time through such period of 15 days, shall be fixed by arbitrators, the Commission and the Contractor each designating one, and the two thus appointed, in case of disagreement, designating a third as umpire.

Lease of
Real Estate.

ARTICLE 24: Lease of Real Estate. The Owner and the Commission shall be under no obligation hereunder, unless the Contractor shall, within two weeks from the date hereof (or such later time as may be approved by the Commission) have obtained and delivered to the Commission, a copy of a lease of the Real Estate, together with (i) evidence satisfactory to the Commission that the Lessor has title to the Real Estate and has duly and validly leased the same to the Contractor in accordance with the terms of said lease, (ii) an opinion of counsel satisfactory to the Commission to the effect that the lessor has title to the Real Estate, and has duly and validly leased the same to the Contractor in accordance with the terms of said lease, and that there are no encumbrances on the property which would affect the right of the Contractor to possession for the term specified or any renewals thereof, or to use the same in accordance with the terms of said lease or this contract, or which would affect the title of the United States of America to the Facilities and other property which are to become or remain the property of the United States of America in accordance with the terms hereof: Provided, That, the Commission may, in lieu of such opinion of counsel, accept a policy of title insurance, in amount and in form and substance satisfactory to the Commission, issued by a Title Company satisfactory to the Commission and authorized to do business in the State of Oregon. Such leases or other agreements with respect to the Real Estate shall be in form and substance satisfactory to the Commission, and shall include (but without limitation) provisions confirming to the Owner and the Commission (as against the owners or lessors of the Real Estate) the same rights in respect to such Real Estate and of the Facilities, including (but without limitation) the right to take over and operate the Real Estate and Facilities as herein provided, as are granted or purported to be granted to the Owner or the Commission by the terms of this contract.

IN WITNESS WHEREOF, the parties hereto have executed this contract in five counterparts as of the day and year first above written.

UNITED STATES OF AMERICA

BY UNITED STATES MARITIME COMMISSION

By E. S. LAND
Chairman

(SEAL)
Attest:

W. C. PEET, Jr.
Secretary

OREGON SHIPBUILDING CORPORATION
(Contractor)

By PAUL S. MARRIN
President

(SEAL)
Attest:

HARRY C. HILL
Secretary

PORTLAND, OREGON
(Business Address)

APPROVED AS TO FORM:

CARL F. FARBACH
General Counsel

Vickery
VHS

SCHN00316804

DISTRICT OF COLUMBIA, SS:

I, KATHRYN F. KELLY, a Notary Public in and for the District of Columbia, do hereby certify that E. S. LAND who is Chairman of the UNITED STATES MARITIME COMMISSION, who as said Chairman of said Commission, for and on behalf of the UNITED STATES OF AMERICA, executed the foregoing Agreement bearing date the 11th day of January, 1941, personally appeared before me in said District of Columbia, the said E. S. LAND being personally well known to me as the Chairman of the UNITED STATES MARITIME COMMISSION, who as said Chairman of said Commission executed for and on behalf of the UNITED STATES OF AMERICA the said Agreement, and acknowledged to me that he executed the same as said Chairman of the Commission and that the same is the free and voluntary act of said UNITED STATES OF AMERICA and of himself as said Chairman of said MARITIME COMMISSION, for the uses and purposes therein expressed.

Given under my hand and seal this 11th day of January, 1941.

(SEAL)

KATHRYN F. KELLY
Notary Public
District of Columbia

My Commission expires September 2, 1945.

DISTRICT OF COLUMBIA, SS:

On this 11th day of January, 1941, before me, a Notary Public in and for the District of Columbia, came PAUL S. MARRIN, to me identified, who, being by me duly sworn, did depose and say that he resides in San Francisco, California; that he is President of OREGON SHIPBUILDING CORPORATION, the corporation described in and which executed the foregoing agreement; that he knows the seal of said corporation and that the seal affixed to the said agreement is the seal of said corporation and was so affixed by order of its Board of Directors; that he executed said agreement as the President of said corporation by like order, and as the free and voluntary act and deed of said corporation and of himself as its President, for the uses and purposes therein expressed.

(SEAL)

KATHRYN F. KELLY
Notary Public
District of Columbia

My Commission expires September 2, 1945.

SCHN00316805

Contract No. MCo-34763

THIS AGREEMENT, made and entered into as of the 1st day of March 1945, by and between the UNITED STATES MARITIME COMMISSION (hereinafter called the "Commission") and Oregon Shipbuilding Corporation, a corporation existing under the laws of the State of Delaware (hereinafter called the "Contractor");

W H E R E A S:

1. Under the provisions of Public Law 247 (77th Congress), the Commission is authorized to construct in the United States, merchant vessels of such type, size and speed as it may determine to be useful for carrying on the commerce of the United States and suitable for the conversion into naval or military auxiliaries and to produce and procure parts, equipment, material and supplies for such vessels, without advertising or competitive bidding;

2. The Commission has determined that the vessels hereinafter described are of a type, size and speed which will be useful for carrying on the commerce of the United States and suitable for conversion into naval or military auxiliaries, and desires the Contractor to construct said vessels;

3. Under date of April 20, 1943 the Commission and the Contractor entered into a contract (herein called the "First Vessel Contract") for the construction by the Contractor of one hundred five cargo vessels, and concurrently with entering into this contract, the Commission and the Contractor will enter into an agreement amendatory of the Vessel Contract providing for the payment of a lump-sum compensation for sixty-two of such vessels which have heretofore been delivered and that the remainder of such vessels shall be completed and paid for in accordance with this contract;

4. Under date of July 18, 1944, the Commission and the Contractor entered into an agreement (herein called the "Second Vessel Contract") which provided for the construction of twenty cargo vessels;

5. Under date of December 29, 1944 the Commission awarded the Contractor a contract for the construction of an additional twenty-five cargo vessels;

6. The Contractor is willing to construct and complete the forty-three vessels to be constructed under the First Vessel Contract which have been excluded therefrom pursuant to the provisions of the agreement amendatory thereof referred to in paragraph 3 of this preamble, the twenty vessels referred to in the Second Vessel Contract, and the twenty-five vessels referred to in paragraph 5 of this preamble, subject to the terms and conditions and for the consideration herein specified;

7. Under dates of January 11, 1941, April 9, 1941 and June 17, 1943, the Contractor entered into contracts (herein called the "Facilities Contract") with the United States of America, represented by the Commission, for the construction and acquisition of certain shipyard facilities (herein called "Facilities") at Portland, Oregon.

ARTICLE 1. Definition

The term "Vessel" shall be deemed to include the hulls of the vessels, whether completed or uncompleted, to be constructed by the Contractor pursuant to the terms of this contract, and also all materials, vessel items and appurtenances, vessel machinery and vessel equipment used or to be used in the construction or equipment thereof.

The term "shipyard" shall mean the Facilities and the land on which they are located.

ARTICLE 2. Statement of Work

(a) The Contractor, acting as an independent Contractor, and not as agent, shall construct, launch, equip and complete ready for service, and deliver to the Commission eighty-eight vessels (herein called the "Vessels") equipped and constructed with their machinery, materials, items, equipment and appurtenances. The Contractor shall perform its obligations as set forth above at the Shipyard, in accordance with the terms of this contract and the plans and specifications (herein called the "Plans and Specifications") designated "Design VC2-S-AP3 as modified to January 1, 1945 which have, at or before the execution of this contract, been approved by the Commission and identified by the signatures of the parties hereto, and which are hereby made a part hereof with the same force and effect as though herein set out in full. The Contractor shall furnish all labor, materials, supplies and equipment (except as herein or in the Plans and Specifications otherwise provided) required to perform its obligations as set forth above.

(b) All general language or requirements contained in the Plans and Specifications are intended to amplify, explain and implement the requirements of this contract, but any such general language or requirements inconsistent with the provisions hereof are superseded by this contract. The Plans and Specifications are also intended to explain each other and anything shown upon the Plans and not stipulated in the Specifications, or stipulated in the Specifications and not shown upon the Plans, shall be deemed and considered as if included in both. In the event of any conflict between the Plans and Specifications, the Specifications shall govern.

ARTICLE 3. Plans and Specifications

The Commission reserves the right to correct any errors or omissions in, and to make any changes in, deductions from, or additions to, the Plans and Specifications. However, changes shall not be made in the general dimensions and characteristics of any of the Vessels unless such changes are made with the written consent of the Contractor.

The Contractor shall not depart from the requirements of the Plans and Specifications unless such departure is approved in writing by the Commission. No changes of any nature affecting the construction, equipping and completion of any of the Vessels are to be started or made by the Contractor before such changes have been duly authorized in writing by the Commission.

ARTICLE 4. Machinery and Equipment to be Furnished by the Commission

The Commission will furnish at the Shipyard to the Contractor the

principal items of material, machinery and equipment and certain sub-contract work to be incorporated in the construction of each Vessel, which items are listed on Exhibit "A" attached hereto and made a part hereof. Such items shall be furnished for the agreed sum of \$1,311,000. per Vessel, which amount shall be deducted from the amounts otherwise payable under the terms of this contract. In the event that any changes are made in the plans and specifications pursuant to the provisions of Article 3 hereof and the Commission, by reason thereof, shall furnish any other or different items of material, machinery and equipment, or shall not be required to furnish any such item, no adjustments will be made in the aforementioned agreed sum of \$1,311,000. and in the event that any such changes result in an adjustment of the contract price under the provisions of Article 9 hereof, the items of material, machinery and equipment to be purchased by the Contractor from the Commission and required for any such change shall be deemed to have been furnished to the Contractor at the same cost as if the change had not been made. All such items to be furnished by the Commission shall be delivered at the Shipyard as and when they are needed for the orderly prosecution of the contract work in accordance with the schedule of delivery dates set forth in Article 5 hereof, and if the Commission shall fail to so furnish any of such items it shall pay the Contractor an amount equal to the actual net increase in the cost of the performance of work hereunder due to such failure. The Commission will also pay to the Contractor the cost to it of correcting deficiencies in any items so furnished provided that the Contractor shall have obtained the permission of the Commission's duly authorized representative to correct such deficiencies and shall make available to the Commission, or its representative, all information necessary for the prosecution by the Commission of any claim against the seller or manufacturer of the item found to be deficient, and the Commission shall also pay the cost of removing and reinstalling any item furnished by it in those cases where the defect therein was not discovered until after it had been installed on board a Vessel. The Commission reserves the right to direct the Contractor to purchase directly any item listed on said Exhibit "A" and will pay to the Contractor the actual net cost, after deducting all rebates and refunds which have accrued to the benefit of the Contractor, of the item so purchased in accordance with such directions. The payments if any, to be made by the Commission under the terms of this Article shall be in addition to and not on account of the contract price or the payments to be made thereof under Article 7 of this contract. In the event that any of the material furnished by the Commission to the Contractor pursuant to the provisions of this Article shall become scrap or excess, the Contractor shall, pursuant to directions of the Commission, sell such material and pay to the Commission an amount equal to the net proceeds of the sale less all expenses incurred by the Contractor in connection therewith.

ARTICLE 5. Schedule of Delivery Dates

The Contractor shall deliver each of the Vessels to the Commission and the Commission shall accept delivery of each of the Vessels from the Contractor after such Vessel has been completed, ready for service, and has passed the tests as prescribed in the Specifications. Such delivery shall be made at or near the Shipyard, at a place alongside of a safe accessible pier at that place, where there must be sufficient water for the Vessel always to be afloat, custom to the contrary notwithstanding, free and clear of all liens and claims of every nature, or at such other place as may be mutually agreed upon.

The work under this contract shall be prosecuted with diligence and the dates on which each of the Vessels is to be delivered to the Commission, unless such time is extended by conditions of "force majeure" as defined in Article 6 hereof, or under any of the other provisions hereof, is to be in accordance with the following schedule:

<u>Commission's Hull Numbers</u>	<u>Delivery Dates</u>
MCV-147	January 5, 1945
148	January 29, 1945
149	February 1, 1945
150	February 5, 1945
151	February 13, 1945
152	February 9, 1945
153	January 12, 1945
154	January 16, 1945
155	January 22, 1945
156	January 25, 1945
157	February 18, 1945
158	February 20, 1945
159	January 29, 1945
160	February 24, 1945
161	March 2, 1945
162	March 9, 1945
163	February 27, 1945
164	March 6, 1945
165	March 13, 1945
166	March 16, 1945
167	March 20, 1945
168	March 23, 1945
169	March 27, 1945
170	March 30, 1945
171	April 3, 1945
172	April 6, 1945
173	April 10, 1945
174	April 13, 1945
175	April 17, 1945
176	April 20, 1945
177	April 24, 1945
178	April 27, 1945
179	April 30, 1945
180	May 3, 1945
181	May 7, 1945
182	May 10, 1945
183	May 14, 1945
184	May 17, 1945
185	May 21, 1945
186	May 24, 1945
187	May 28, 1945
188	May 31, 1945
189	June 4, 1945
682	June 7, 1945
683	June 11, 1945
684	June 15, 1945
685	June 18, 1945
686	June 21, 1945
687	June 25, 1945

<u>Commission's Hull Numbers</u>	<u>Delivery Dates</u>
MCV-688	June 28, 1945
689	July 2, 1945
690	July 6, 1945
691	July 10, 1945
692	July 14, 1945
693	July 18, 1945
694	July 23, 1945
695	July 28, 1945
696	August 4, 1945
697	August 8, 1945
698	August 11, 1945
699	August 25, 1945
700	September 5, 1945
701	September 10, 1945
860	August 20, 1945
861	August 30, 1945
862	September 15, 1945
863	September 29, 1945
864	October 10, 1945
865	October 20, 1945
866	October 30, 1945
867	November 10, 1945
868	November 20, 1945
869	November 29, 1945
870	December 8, 1945
871	December 15, 1945
872	September 20, 1946
873	September 25, 1945
874	October 5, 1945
875	October 15, 1945
876	October 25, 1945
877	November 5, 1945
878	November 15, 1945
879	November 24, 1945
880	December 3, 1945
881	December 11, 1945
882	December 21, 1945
883	December 27, 1945
884	December 31, 1945

It is mutually agreed by and between the parties hereto that time is of the essence of this contract, and that all actions taken by the parties hereto and their agents shall be taken to the end that the performance of this contract will be fully expedited.

In the event that the Contractor does not deliver the Vessels, or any thereof, on or before the specified delivery dates, the sole remedy of the Commission shall be to terminate the contract for default and the Contractor shall not be liable for any damages on account of the delayed delivery.

ARTICLE 6. Definition of Term "Force Majeure"

The term "force majeure" as employed herein shall be deemed to mean all causes whatsoever (except inclement weather of the ordinary seasonable nature) not reasonably within the control of the Contractor among which, but not exclusive of other causes, are acts of God; war between the United States and any foreign country; civil war, riot or insurrection in the United States; requirement of, intervention by or delays caused by civil, naval or military authorities or other agencies of government; arrests and restraints of rulers and people; priorities; blockades; embargoes, vandalism; sabotage; epidemics; strikes, lockouts or other industrial disturbances, earthquakes; landslides; floods, hurricanes and cyclonic storms; damage by lightning; explosions; collisions; strandings; fires; shortage of materials and equipment, provided that the Contractor has ordered all necessary materials and equipment at the proper times and used reasonable effort to obtain delivery of such materials and equipment at the time and in the order required to carry on the work properly; shortage of labor, delays of carriers by land, sea or air; or delays due to any failure on the part of the Commission to perform its obligations hereunder, including, but not limited to, failure to act within a reasonable time on plans and specifications prepared by the Contractor and submitted for Commission's approval. or failure to furnish the working plans for the Vessels referred to in Article 12 hereof; or failure to cause the machinery and equipment referred to in Article 4 to be delivered at the site of the Shipyard when such material is required for the orderly prosecution of the work hereunder; or delays due to changes ordered by the Commission in any plans or specifications.

Written notice of any delay caused by "force majeure" and the anticipated result thereof shall, when knowledge thereof has come to the Contractor, be given promptly by the Contractor to the Commission. Within twenty (20) days after such cause of delay has ceased to exist, the Contractor shall file with the Commission a statement of the actual delay resulting from such cause; Provided such notices shall have been given the time for delivery of the Vessel or Vessels, or any following Vessel or Vessels affected by such "force majeure", shall be extended for such time as the Contractor shall have been actually delayed in the completion of such Vessel or Vessels by reason of such "force majeure". In the event that the parties are unable to agree that the cause of delay is "force majeure" or as to the extent of the resulting delay, the matter shall be referred to arbitration as herein-after provided. The duty of submitting and going forward with the evidence before the Arbitrators shall be on the Contractor.

ARTICLE 7. Contract Price and Payment Thereof

(a) As compensation for all the work to be performed hereunder the Commission will pay the Contractor the sum of \$237,600,000 (herein called the "contract price") subject to the adjustments, additions and deductions hereinafter provided for, such price being based on a price \$2,700,000 per vessel (said price as decreased or increased from time to time under the provisions of Article 10 hereof is herein called the "unadjusted vessel price").

(b) Payment of the contract price shall be made as follows:

(1) Partial payments equal to 96 per cent of the value of the work completed (inclusive of materials, machinery and equipment delivered at the Shipyard, but exclusive of the items listed on Exhibit "A" attached hereto), less any amounts theretofore paid

pursuant to the provisions of this paragraph shall be made to the Contractor as the work progresses at weekly intervals or at such shorter intervals as may be mutually agreed upon. The value of the work shall be based on the contract price, as adjusted from time to time, under the provisions of Articles 8, 9 and 10 of this contract, after deducting the sum of \$1,311,000 per Vessel. In the event that the Contractor shall decrease or increase the contract price under the provisions of Article 10 hereof by such an amount that the partial payments theretofore made under the provisions of this paragraph shall be more or less than 96 per cent of the value of the work, as represented by such decreased or increased contract price (together with all increases or decreases provided for in Articles 8 and 9 hereof), the Commission will pay the Contractor, in the event of such an increase in contract price, an amount equal to the difference between payments theretofore made and 96 per cent of the value of the work, as represented by the increased contract price, and in the event of a decrease in the contract price, will withhold further payments hereunder until the total payments made shall equal but not exceed 96 per cent of the value of the work completed, as represented by the decreased contract price. The Commission will include as part of the value of the work completed, subject to such terms and conditions as it may prescribe, the value of partially completed material, equipment and machinery in course of manufacture for the performance of the work hereunder but not yet completed or delivered at the Shipyard if title to such partially completed material, equipment or machinery shall have vested in the Commission.

(2) At any time when the value of the work performed hereunder, based on the contract price adjusted as aforesaid, shall exceed by the sum of \$550,000 the payments made under the preceding paragraph (1), the Commission shall pay the Contractor an amount equal to that by which the value of the work exceeds said payments plus \$550,000.

(3) Within 30 days after the date of delivery of the last Vessel to be constructed hereunder the unpaid portion of the contract price (including all adjustments therein to be made pursuant to the terms of this contract) shall be paid to the Contractor; Provided that if the Commission shall determine at such time that the Contractor will have an obligation to make any payments under the provisions of Article 10 hereof, an amount not to exceed the estimated amount of such payments may be retained by the Commission until final adjudication of the Contractor's obligations under said Article 10.

(c) If through error, miscalculation or otherwise the Contractor shall be paid an amount in excess of the contract price as adjusted under the various provisions of this contract, the Contractor will promptly, upon receipt of demand therefor from the Commission, repay to it such excess.

ARTICLE 8. Adjustment of Contract Price on Account of Changes in Labor Costs

(a) The contract price shall be subject to increase or decrease on account of increased or decreased labor rates or material costs, such adjustment to be determined in accordance with the following formula:

1. Labor

The Commission will obtain from the United States Department of Labor, Bureau of Statistics, the index number of the Pacific Zone of Average Hourly Earnings (excluding overtime) of Production Workers in Shipbuilding Companies Having Contracts with the United States Maritime Commission and the Navy Department for the month of December, 1944. The Commission will likewise obtain such index of average hourly earnings for each month subsequent to December, 1944, during which the Contractor performs work under this contract and will determine to the nearest one-tenth of one per cent the percentage, if any, (hereinafter called the "labor adjustment percentage") by which the index number for such calendar month is greater or less than the index number for the month of December, 1944, and the contract price shall be increased or decreased, as the case may be, by an amount determined by multiplying the labor adjustment percentage for each such month by the total amounts paid or payable by the Contractor during such month (including, but not limited to, wages, piece work and incentive bonuses, overtime, shift and vacation allowances, pay for lunch periods and sick leave) to employees (other than corporate officers) engaged in direct and indirect labor in the performance of work under this contract (to the extent that such wages are paid for such performance) and dividing the resultant by the sum of such labor adjustment percentage and 100 per cent. There shall be added to or deducted from the contract price, as the case may be, an additional amount equal to increases or decreases in the cost of state and federal social security and old age and unemployment insurance taxes and workmen's compensation premiums on account of increased or decreased labor rates, such amount to be determined by the Commission.

2. Materials

The Commission will obtain from the United States Department of Labor, Bureau of Statistics, the index number of wholesale prices for Group VI, Metal and Metal Products, for the month of December, 1944. The Commission will likewise obtain such index number for each subsequent month during which the Contractor shall perform work under the provisions of this contract. The average of such index numbers so obtained for the months included in each calendar quarter shall be taken as the index number for such calendar quarter. The Commission shall determine to the nearest one-tenth of one per cent the percentage, if any, (hereinafter called the "material adjustment percentage"), by which such average index number for each such calendar quarter is greater or less than the index number for the month of December, 1944, and the contract price shall be increased or decreased, as the case may be, by an amount to be determined by multiplying the material adjustment percentage for each such calendar quarter by the aggregate amount of the firm quotations received by the Contractor during each such quarter for materials for use in the performance of work under this contract and dividing the resultant by the sum of such material adjustment percentage and 100 per cent; provided, however, that the Commission may deny or reduce the adjustment with respect to any item of such materials

if the Commission finds that it would have been practicable to have obtained a firm quotation therefor at an earlier date. If reasonable firm quotations cannot be obtained by the Contractor on any item or items of such materials, the contract price shall be further increased or decreased, as the case may be, by an amount determined by multiplying the material adjustment percentage for each calendar quarter by the aggregate amount of payments made by the Contractor for such material for which firm quotations cannot be obtained and by dividing the resultant by the sum of such material adjustment percentage and 100 per cent.

3. Suspension of Work

In the event that there shall be a suspension of work hereunder either on account of the fact that a substantial portion of the Facilities shall be destroyed because of fire, earthquake, windstorm or other causes beyond the control of the Contractor, including, without limitation, fires caused by the negligence of the Contractor's employees or because of the fact that as a result of compliance by the Contractor with any Government order in respect to wage rates, hours of work, or other labor conditions, or any labor agreement approved by the Government, or any decision of any agency of the Government in respect thereto, including the War Labor Board, or the Shipbuilding Commission, work by the Contractor's employees is discontinued, then and in such event the Commission will pay to the Contractor in addition to the contract price the net cost resulting from such suspension of work. The term "suspension of work" as used herein shall mean a reduction of the number of workmen employed in the performance of the work hereunder to a number less than one-half of the number who continually and properly should be employed in that work at the then stage of performance of the contract work.

(b) In the event the Commission shall find that the method set forth in the preceding paragraph does not equitably reflect the changes in cost occasioned by changes in wage rates or material costs in the performance of the work hereunder, the Commission may substitute another method for adjusting the contract price satisfactory to the Contractor.

ARTICLE 9. Adjustment in Contract Price on Account of Changes in Plans and Specifications

Within 20 days (or such longer period as the Commission may allow) after receipt of direction from the Commission to make changes in the plans or specifications of any of the Vessels or of approval by the Commission of changes requested by the Contractor, the Contractor will furnish to the Commission in writing a statement of its estimate of the net increase or net decrease in cost which will result from such changes. The Commission (or a board or committee designated by it to act on its behalf) shall consider the statements so submitted by the Contractor and on the basis thereof and of such other material as it may deem relevant shall determine and furnish to the Contractor the amount of any such net increase or net decrease in cost. In determining the increased or decreased estimated cost which will result from any change, the Commission will base such determination on the Contractor's own operations and not upon operations of other Contractors with the Commission. The Commission agrees that it will make such determination within sixty days after the Contractor has furnished its estimate of the net increase or net decrease

to the Commission. In the event of a net increase, the amount thereof plus 10 per cent shall be added to the contract price. In the event of a net decrease, the amount thereof shall be deducted from the contract price.

ARTICLE 10. Repayment of Profits - Optional Adjustment in Contract Price

(a) Subsequent to the completion of the work to be performed hereunder and the determination of profits derived from the performance thereof by the Contractor, the Contractor shall pay the Commission an amount equal to that by which such profits exceed the maximum profit as hereinafter defined. The amount of such profit shall be determined by the Commission pursuant to the provisions of its "Regulations Prescribing the Method of Determining Profit, Adopted May 4, 1939" including amendments and annotations to September 1, 1941, and for the purpose of such determination the Contractor shall make such statements and returns to the Commission as it shall direct and shall also make available to inspection and audit by representatives of the Commission all books, files and other records of the Contractor.

It is understood and agreed that the Commission, in determining the Contractor's profits in accordance with the aforesaid Regulations, will apply such Regulations as regulations for determining profit under a fixed price contract and not as regulations for determining reimbursable costs, and to that end will allow for the purposes of determining the Contractor's profit all costs, charges and liabilities incurred by the Contractor, including those resulting from the negligence of its corporate officers, agents or employees, or those made necessary because of any guarantee contained in this contract and all insurance premiums, including, without limitation, premiums on products liability insurance, the cost of completion or termination of this contract (unless the Contractor shall be compensated therefor under another agreement with the Commission), including the cost of preserving and protecting any property of the Commission located in the Shipyard and legal, accounting, clerical, office, administrative and other expenses incident to final settlement of this contract. The Commission, in determining profit, will make the specific exclusions provided for in said Regulations, but no item of cost, properly allocable under sound accounting practice to the performance of the contract work, shall be disallowed on the grounds that it is excessive or unreasonable except in cases where (i) there is a showing of reckless or wilful misconduct or evasion on the part of the Contractor or its corporate officers; (ii) the payment has been made or the liability incurred to a corporation affiliated with the Contractor or in which a director or corporate officer of the Contractor holds a substantial stock interest or for a purpose other than salary payments to a director, corporate officer or employee of the Contractor or a partnership in which such person is a member; or (iii) a director, corporate officer or employee of the Contractor shall have had a pecuniary interest in the contract or transaction on account of which the payment was made or the liability incurred, in which cases the Commission in its sole discretion may disallow the payment or liability in determining costs or such portion thereof as the Commission finds to be excessive. With the exception of said exclusions specifically provided for in said Regulations, the Commission shall make no other exclusions from the cost of performing the contract work except capital stock taxes in excess of the amount approved by the Commission and advertising not incident to the performance of this contract. Without limiting the Commission's obligation to include all costs, charges and expenses of performing the contract work, except as may have hereinbefore otherwise been provided, the Commission will include therein

losses incurred by the Contractor due to the necessity of disposing of materials and supplies acquired for the purpose of performing the work under the terms of this contract and not used for such purpose if the purchases made by the Contractor were not unreasonably in excess of the anticipated requirements in respect thereof and if the Commission shall have been given an opportunity to purchase such items at a price equal to the cost thereof to the Contractor, and the Commission shall not have elected to purchase such items within ten days of the receipt of a notice of the Contractor's desire to sell the same to the Commission.

(b) Any amounts in excess of the then unpaid portion of the contract price which may be payable by the Contractor to the Commission under the provisions of this Article shall be paid by the Contractor within 30 days of the date of the receipt of a demand therefor from the Commission.

(c) The maximum profit for the purposes of this contract shall be the sum of \$10,208,000 unless and until the amount thereof shall be increased as herein provided.

(d) Prior to laying the keel of any one or more of the Vessels to be constructed hereunder, the Contractor may decrease or increase the unadjusted vessel price for each of the Vessels the keels of which have not then been laid in the sum of \$75,000 or any multiple thereof, provided that no increase may be made which will cause such unadjusted vessel price to exceed the sum of \$3,300,000. The Contractor may thereafter from time to time in like manner and subject to like limitations decrease or increase the unadjusted vessel price for each of the Vessels the keels of which have not then been laid. In the event of any such decrease or increase, the contract price shall be decreased or increased, as the case may be, by an amount equal to the decrease or increase in the unadjusted vessel price multiplied by the number of Vessels, the keels of which have not then been laid. The contract price as so adjusted shall be subject to the further adjustments theretofore made or thereafter to be made, pursuant to the provisions of the preceding Articles 8 and 9 hereof. Each notice of election to decrease or increase the unadjusted vessel price as aforesaid shall be given by the Contractor in writing to the Commission and sent by registered mail, addressed to the Secretary, United States Maritime Commission, Washington, D. C., which notice shall be effective upon mailing.

(e) The term "maximum vessel profit" as used herein shall mean an amount based on the unadjusted vessel price determined in accordance with the following table:

<u>Unadjusted Vessel Price</u>	<u>Maximum Vessel Profit</u>
\$3,300,000	\$41,200
3,225,000	50,550
3,150,000	59,900
3,075,000	69,250
3,000,000	78,600
2,925,000	87,950
2,850,000	97,300
2,775,000	106,650
2,700,000	116,000
2,625,000	125,350
2,550,000	134,700
2,475,000	144,050
2,400,000	153,400
2,325,000	162,750

In the event of a decrease in the unadjusted vessel price made pursuant to the provisions of paragraph (d) hereof, the maximum profit shall be increased by the difference between the maximum vessel profit shown on the preceding table for the unadjusted vessel price in effect prior to the decrease and that shown on such table for the unadjusted vessel price subsequent to such decrease, multiplied by the number of Vessels the keels of which have not been laid. In the event of any increase in the unadjusted vessel price made as aforesaid, the maximum profit shall be decreased by an amount equal to the difference between the maximum vessel profit shown in the preceding table for the unadjusted vessel price as so increased and that shown for the unadjusted vessel price as in effect prior to the increase, multiplied by the number of Vessels the keels of which have not been laid. In no event, however, shall the maximum profit as adjusted under the provisions hereof exceed the sum of \$14,322,000.

ARTICLE 11. Inspection

(a) All material and workmanship furnished by the Contractor, unless otherwise provided in the Specifications, shall be subject to inspection by inspectors of the Commission at any and all proper times during manufacture or construction at any and all places where such manufacture or construction shall be carried on.

(b) The Contractor shall furnish promptly all reasonable facilities to the extent such facilities are available and materials, necessary for the Commission's representatives (including inspectors and auditors), including suitably furnished offices with light, heat, telephone, desks, drawing tables, and filing cabinets.

ARTICLE 12. Working Plans to be Furnished by Commission

(a) The Commission shall furnish a full set of See Bee tracing of working plans and bills of material required for the construction of the Vessels to the Contractor in accordance with a schedule of dates which will be agreed upon by the Contractor and the Commission within two weeks after the signing hereof. If any changes are made in such plans during the course of construction of the Vessels, the Contractor shall promptly furnish the Commission with new tracing showing such changes.

(b) Any working plans not supplied by the Commission shall, as they are prepared during the progress of the work, be submitted (in such numbers as may be required) to the Commission's representative at the plant, and action thereon by the Commission shall be taken as promptly as possible and in any event within seven days after submission of any such plan.

(c) The Commission shall promptly pass all work and material conforming to the requirements of this contract, and shall promptly reject all work and material not conforming to the requirements of this contract. The Contractor shall promptly correct workmanship which does not comply with the requirements of this contract by making the same comply therewith and shall promptly replace any material or equipment which does not conform to such requirements.

(d) All inspection and tests by the Commission shall be performed in such manner as not to unnecessarily delay the work.

ARTICLE 13. Title - Liens - Tax

(a) Title to all Vessels whether completed or uncompleted and to all materials, equipment, supplies and other property assembled at the Shipyard or elsewhere for the purpose of being used in the construction of the Vessels, shall vest in the Commission. Any subcontract, purchase order or other agreement entered into by the Contractor may provide that title to the materials, machinery and equipment to be manufactured, purchased or constructed under the terms of such subcontract, purchase order or other agreement, shall vest in the Commission and shall so provide in those cases where such material, machinery or equipment is included as part of the value of the contract work prior to the date on which it shall have been delivered to the Shipyard. These provisions as to title shall not operate to relieve the Contractor of any of its obligations under this contract.

(b) When any payment is to be made hereunder, the Commission, as a condition precedent to making such payment, may, in its discretion, require that affidavits satisfactory to it be furnished by the Contractor showing what, if any, liens or rights in rem of any kind against the Vessels or the materials or equipment on hand for use in the construction thereof have been or can be acquired for or on account of any work done, or any materials or equipment already incorporated as a part of the Vessels, or on hand for that purpose; but it is hereby further stipulated, covenanted and agreed by the Contractor, for itself and on its own account and for and on account of all persons, firms, associations, or corporations furnishing labor or material for the Vessels, and this contract is upon the express condition, that no liens or rights in rem of any kind shall lie or attach upon or against the Vessel, or materials or equipment therefor, or any part thereof, or of either, for or on account of any work done upon or about such Vessels, or of any materials or equipment furnished therefor or in connection therewith, or for or on account of any other cause or thing, or of any claims or demands of any kind, except the claims of the Commission; Provided, however, that in case by reason of the laws of any State, the Contractor shall be unable to comply with such express condition, the Commission may waive such condition or take such other action as it may deem proper under the circumstances.

(c) The Contractor shall pay all United States, State, County, and City or other taxes, assessments or duties lawfully assessed against the Vessels, materials, supplies or equipment to be used under this contract prior to delivery thereof to the Commission. It is understood and agreed, however, that the contract price does not include any Federal tax imposed by Chapters 25 or 29 of the Internal Revenue Code or similar taxes which may hereafter be imposed on the Vessels or subsidiary articles to be purchased by the Contractor and incorporated therein. In the event that the Contractor is required to pay any tax imposed by said Chapters of the Internal Revenue Code or any amendments thereto or modifications thereof, the Commission will reimburse the Contractor in an amount equal to the tax so paid.

ARTICLE 14. Claims for Patent Infringement

The Commission shall be responsible for any and all claims against the Contractor arising from infringement of patents or patent rights or the use of patented articles arising in connection with the use of any material, equipment or machinery furnished by it or methods of construction required by plans or specifications which it furnished. The Contractor shall be responsible for any and all claims made against the Commission or the Vessels for infringement of patents or patent rights or for the use of patented articles in connection with any material, equipment or machinery furnished by the Contractor or design or method of construction not required by the plans and specifications.

ARTICLE 15. Survey by American Bureau of Shipping

Each Vessel shall be built under survey of the American Bureau of Shipping and the Contractor shall allow duly authorized representatives of said Bureau access to the Shipyard and to the work of subcontractors and to the Vessels at any and all proper times during the performance of the contract. The Commission will pay all fees charged by said Bureau.

ARTICLE 16. Domestic Preference

In the performance of the work covered by this contract the Contractor, subcontractors, material men, or suppliers shall use only such unmanufactured articles, materials, and supplies, as have been mined or produced in the United States, and only such manufactured articles, materials, and supplies as have been manufactured in the United States substantially all from articles, materials, or supplies mined, produced or manufactured, as the case may be, in the United States; the foregoing provision shall not apply to such articles, materials, or supplies of the class or kind to be used or such articles, materials from which they are manufactured as are not mined, produced or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality, or to such articles, materials or supplies as may be excepted by the head of the Department under the proviso of Title III, Section 3, of the Act of Congress approved March 3, 1933 (41 U.S.C. 10).

ARTICLE 17. Reports of Espionage and Sabotage

(a) The Contractor shall immediately submit a confidential report to the Navy Department, with copies to the Commission or such other Government agencies as said Department may designate, whenever it has information indicating (i) that any of its employees may be engaged in subversive activity at any place or (ii) that an active danger of espionage or sabotage exists at any plant, factory, or site at which work under the contract is being performed or at which material acquired, fabricated, or manufactured in connection with the performance of the contract is stored. The report shall contain a complete statement of such information. The Contractor shall instruct its personnel to submit any information coming to their attention with respect to the foregoing.

(b) The Contractor shall, whenever directed by the Navy Department or the Commission, submit to the Department any and all information which the Contractor may have concerning any of its employees engaged in work at any plant, factory or site at which work under the contract is being performed.

(c) The Contractor shall refuse to employ, or if already employing will forthwith discharge from employment, and will exclude from any plant, factory or site at which work under the contract is being performed, any person or persons whom the Commission or the Secretary of the Navy or his duly authorized representatives, in the interest of security against espionage, sabotage or subversive activity, may designate.

(d) The Contractor, in each subcontract or purchase order which it may make or place under the contract, shall include stipulations conforming substantially to the language of the preceding paragraphs of this Article, if required by the Navy Department.

ARTICLE 18. Prohibition Against Employment of Certain Persons and Against Discrimination

The Contractor shall not employ any person who advocates, or who is a member of an organization that advocates, the overthrow of the Government of the United States by force or violence to perform any part of the work under this contract, and as a condition to the employment of any person for the performance of such work, the Contractor shall, if the Commission so directs, require such person to execute and to file an affidavit in such form as to satisfy the requirements of Section 4 of Public Law No. 23 (77th Congress), approved March 27, 1941, but the execution and filing of such affidavit shall be without prejudice to the right of the Commission to require such further evidence in the premises as it may deem desirable.

The Contractor agrees that in the performance of the work under this contract, it will not discriminate against any employee or applicant for employment because of race, creed, color or national origin, and that it will include a similar provision in all subcontracts made hereunder. The Contractor further agrees that it will comply with Executive Order 9346, approved May 27, 1943.

ARTICLE 19. Labor Laws

(a) The Contractor shall not employ any person undergoing sentence of imprisonment at hard labor.

(b) The Contractor will report, and will cause all subcontractors to report in like manner, at such times as may be required by the United States Department of Labor, on forms to be furnished by the United States Department of Labor, the number of persons on their respective pay rolls, the aggregate amount of such pay rolls, the man hours worked, and the total expenditures for materials. He shall furnish to the Department of Labor the names and addresses of all subcontractors on the work at the earliest date practicable: Provided, however, that the requirements of this paragraph shall be applicable only for work at the site of the construction project.

(c) The Contractor and subcontractors at the site of the construction project will comply with the provisions of Public Act No. 324, 73rd Congress, approved June 13, 1934, (48 Stat. 948) and with the provisions of the regulations issued by the Secretary of Labor thereunder, entitled "Regulations Applicable to Contractors and Subcontractors on Public Building and Public Work and on Building and Work Financed in Whole or in Part by Loans or Grants from the United States", published in the Federal Register April 30, 1942.

(d) The Contractor and its subcontractors shall pay all mechanics and laborers employed on work under this contract and directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those which may be determined by the Secretary of Labor pursuant to the provisions of the Act approved March 3, 1931 (46 Stat. 1494) to be the prevailing rates for the various classes of such laborers and mechanics; and the scale of wages to be paid shall be posted by the Contractor in a prominent and easily accessible place at the site of the work. The Commission shall have the right to withhold from the Contractor and subcontractors so much of accrued payments as may be considered necessary by the Commission to pay to laborers and mechanics employed by the Contractor or any subcontractor on the work the difference between the rates of wages required by the contract to be

paid laborers and mechanics on the work and the rates of wages received by such laborers and mechanics and not refunded to the Contractor, subcontractors or their agents.

(c) This contract is subject to the provisions of the Act of June 25, 1936 (Public No. 814), entitled "An Act to provide more adequate protection to workmen and laborers on projects, buildings, constructions, improvements, and property wherever situated, belonging to the United States of America, by granting to the several states jurisdiction and authority to apply their States workmen's compensation laws on all property and premises belonging to the United States of America".

ARTICLE 20. Suspension of 8-hour Law

Until otherwise provided by law, provisions of law prohibiting more than 8 hours of labor in any one day of persons engaged upon work covered by this contract shall, in accordance with the provisions of the Act approved October 10, 1940 (Public No. 831, 76th Cong.), be suspended. The provisions of said Act approved October 10, 1940 are applicable to this contract.

ARTICLE 21. Warranty Against Brokerage Fees

The Contractor warrants that he has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or fee, contingent or otherwise. Breach of this warranty shall give the Commission the right to terminate the contract, or, in its discretion, to deduct from the contract price or consideration the amount of such commission, percentage, brokerage, or fee. This warranty shall not apply to commissions payable by contractors upon contracts of sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

ARTICLE 22. Maintenance of Working Capital

The Contractor covenants that it will have and maintain at all times sufficient working funds for carrying out its obligations hereunder and will make prompt payments for all labor, materials, services and other charges which are to be paid under this contract. The Commission reserves the right to pay at its option directly to any subcontractor, materialman, laborer or other person furnishing materials, labor or services for the performance of the work hereunder any amounts which may from time to time be due and unpaid to such persons and to deduct from the payments which may otherwise be due the Contractor under the terms of this contract any amount so paid plus 5 per cent thereof, provided it shall have given the contractor 15 days notice of its intention to make such payment. In the event, however, the Commission exercises such right, it shall be liable to the Contractor for any overpayments which it may make and nothing in this Article contained shall be construed as conferring any rights upon any person or corporation not a party to this contract.

ARTICLE 23. Events of Default

The following shall constitute events of default under this contract:

(a) The failure of the Contractor to prosecute the work with such diligence and in such manner as will enable it to deliver the Vessels in accordance with the delivery dates set forth herein, except and to the extent that such failure is due to "force majeure" as hereinbefore defined,

provided that the Commission shall have given the Contractor notice of such failure and that the Contractor shall not within 15 days of the date of receipt of such notice have shown to the satisfaction of the Commission that it has taken steps sufficient to remedy the failure in a manner satisfactory to the Commission.

(b) The material failure of the Contractor in any other respect to use due diligence in the performance of the work hereunder or its failure to perform any of the covenants, agreements or undertakings on its part to be performed hereunder, including, but not limited to, its agreement to make prompt payment for all labor, materials, services and other charges which are to be paid under this contract, provided, that the Commission in either instance shall give notice to the Contractor as to such failure, and the Contractor shall not within 15 days after being so notified correct any failure to use due diligence or undertake the performance of said covenants, undertakings or agreements required to cure such failure and thereafter prosecute in good faith to completion all such work or performance required to cure such failure.

(c) The filing by the Contractor of a petition in bankruptcy or for reorganization under the Bankruptcy Act or the entry of an order upon petition against the Contractor adjudicating the Contractor a bankrupt, or the appointment of a receiver or receivers of the Contractor or any property belonging to the Contractor necessary for the performance of its obligations under this agreement.

ARTICLE 24. Right of Termination Upon Default

Upon the occurrence of any of the events of default specified in Article 23 hereof, the Commission may at its election terminate this contract and take possession of the Vessels, either completed or uncompleted, and all records, books, accounts, plans and specifications delivered to or acquired by the Contractor for the purpose of the performance of the work hereunder, as well as any equipment or materials of the Contractor at the Shipyard for use in the performance of such work. The Contractor will, if so directed by the Commission, assign to it any or all of the orders, subcontracts or other agreements for the performance of labor or services or the delivery of materials for use in connection with the performance of the work hereunder.

In the event of termination of this contract under the provisions of this Article, the Contractor's right to use and occupy the Shipyard shall cease and determine and the Commission may, if it so elects, terminate the Facilities Contract in the manner and with the effect specified therein upon the occurrence of an event of default thereunder.

Upon termination of this contract pursuant to the provisions of this Article, the Commission shall pay to the Contractor those amounts (and only those amounts) which have become due and payable under the provisions of this contract, less an amount, if any, by which the amount of profit theretofore derived by the Contractor from the performance of the work hereunder shall exceed an amount equal to the total maximum vessel profit payable with respect to the Vessels delivered prior to the termination of this contract, the maximum vessel profit payable with respect to each of such Vessels to be the maximum vessel profit in effect as to such Vessel at the time the keel thereof was laid, and less any payments due from the Contractor to the Commission. If there shall be any such excess profit and if the payments then due the Contractor shall not equal such excess profit, the Contractor

agrees to pay to the Commission promptly upon demand an amount equal to the difference between such excess profit and the payments then otherwise due to it under the provisions of this contract.

The rights conferred upon the Commission under this Article are in addition to and not in substitution of any rights which the Commission would otherwise have either at law or in equity on account of the occurrence of the events described in Article 23 hereof.

ARTICLE 25. Optional Termination of Work by the Commission

(a) The Commission may at any time by notice to the Contractor terminate all or part of the work to be performed under this contract. In such event the Contractor shall (1) terminate work under this contract on the date and to the extent specified in the notice of termination, (2) place no further orders or subcontracts for materials and services, except as may be necessary for the completion of such portions of the work under this contract as may not be terminated, (3) terminate all orders and subcontracts to the extent that they relate to the performance of any work terminated by the notice of termination, except such orders and subcontracts as the Contractor desires to have completed for its own account, (4) assign to the Commission in a manner and to the extent directed all right, title and interest of the Contractor under such orders or subcontracts so terminated, except rights in respect to machinery, materials, equipment and supplies retained by the Contractor or incorporated in any Vessel delivered to the Commission, and (5) subject to the approval of the Commission, or a duly authorized representative thereof, which approval shall be final for all purposes of this Article, settle all claims arising out of termination of orders and subcontracts.

(b) The termination of the work under this contract pursuant to this Article shall not have the effect of divesting the Commission of title to any materials, machinery, equipment, supplies, or work in process, or Vessel, either completed or uncompleted, and title to any such property not owned by the Commission, which has been made the basis of payment under the provisions of Article 7 hereof, or on account of which the Commission shall be obligated to make payment under the provisions of paragraph (d) of this Article, shall be transferred to the Commission in the manner and to the extent that it may direct, and all of such property, with the exception of that which is retained by, or sold to or by, the Contractor pursuant to the provisions of this Article, shall be removed by the Commission from the Shipyard as promptly as possible. In the case of any Vessel on a way or at an outfitting dock not owned by the Commission or some other agency or instrumentality of the Government, work on which has been terminated, the Commission agrees that it will cause such Vessel to be removed from the Shipyard of the Contractor within thirty (30) days of the date of notice of termination, and in the event removal thereof is not accomplished within such period of time, the Commission will pay to the Contractor any losses or damages occasioned thereby.

(c) In respect to each Vessel delivered prior to the effective date of termination, or subsequent thereto, in accordance with provisions of a notice of termination, the Commission shall pay to the Contractor the unadjusted Vessel price in effect as of the date the keel of such Vessel was laid, increased or decreased, as the case may be, by an amount equal to

the adjustments provided for in Article 8 and Article 9 of this contract, to the extent that such adjustments are applicable to work performed on such Vessel. Such payment shall be made in the case of any Vessel delivered prior to the effective date of termination within thirty (30) days of such date, and in the case of any Vessel delivered subsequent thereto within thirty (30) days of the date of delivery of such Vessel, and the obligation of the Commission to make payments under this paragraph shall be subject to its rights under the provisions of paragraph (h) hereof.

(d) In addition to the payment specified in paragraph (c) hereof, the Commission will pay to the Contractor such amount as the Commission, or its duly authorized representative, and the Contractor shall agree by negotiation should be paid to the Contractor by reason of the total or partial termination of work pursuant to this Article, which amount may include a reasonable allowance for profit, or in the event that such amount cannot be agreed upon promptly, the Commission shall pay to the Contractor, but without duplication of any amounts paid pursuant to the provisions of this contract, the following amounts:

(1) the cost of the work performed under this contract prior to the effective date of termination exclusive of such portion thereof as is attributable to the Vessels paid, or to be paid for, under the provisions of paragraph (c) of this Article, plus a profit equal to (i) 2 per cent of the portion of such cost which represents the cost of articles and materials not processed by the Contractor, and (ii) 8 per cent of the remainder of such cost, but the aggregate of such profit in no event to exceed 6 per cent of the total of such cost,

(2) an amount equal to the cost to the Contractor of settling and paying claims arising out of the termination of work under subcontracts or orders exclusive of the amounts paid or payable on account of supplies and materials delivered or services furnished by the subcontractor prior to the effective date of the notice of termination of work under this contract, which amount shall be included in the cost on account of which payment is made under subparagraph (1) hereof,

(3) the reasonable cost of preserving and protecting property of the Commission in accordance with requirements of this Article and any other reasonable cost incidental to the termination of work under this contract including expenses incidental to the determination of the amount due to the Contractor as a result of such termination.

The total amount to be paid to the Contractor under the provisions of paragraph (c) and subparagraphs (1) and (2) of this paragraph (d), together with all amounts paid under the provisions of Article 7 hereof, shall in no event exceed the contract price of all the Vessels (adjusted under Article 10), plus or minus, as the case may be, the adjustments in contract price provided for in Article 8 and Article 9 hereof to the extent that such adjustments are applicable to work performed prior to the effective date of termination.

(e) The obligation of the Commission to make any payments under this Article shall be:

(1) subject to deductions in respect of (i) all payments made under the provisions of Article 7 hereof, (ii) any claims that the Commission may have against the Contractor in connection with this contract, and (iii) the price agreed or the proceeds of the sale of material, supplies, equipment, machinery or other property retained by the Contractor or sold and not otherwise recovered by or credited to the Commission,

(2) in the discretion of the Commission subject to deduction in respect of the amount of any claim of any subcontractor or supplier whose subcontract or order shall have been terminated provided that the Commission shall assume and agree to pay such claim of such subcontractor or supplier.

(f) The Commission shall make partial payments and payments from time to time of the amount to which the Contractor shall be entitled under this Article either determined by agreement or otherwise whenever in the opinion of the Commission's representatives such payments will not exceed the amounts which will ultimately be due the Contractor under the provisions hereof.

(g) For the purposes of paragraph (d) hereof the amount of the payments to be made by the Commission to the Contractor shall be determined in accordance with "the Statement of Principles for the Determination of Cost Upon Termination of Government Fixed-Price Supply Contracts approved by the Joint Contract Termination Board December 31, 1943." The Contractor for a period of three years after final settlement under this contract shall make available to the Commission at all reasonable times at the office of the Contractor all of its books, records, documents and other evidence bearing on the cost and expenses of the Contractor under this contract and in respect to the termination of work thereunder.

(h) In the event of termination of work under the provisions of this Article the profits which the Contractor will be entitled to retain under the provisions of Article 10 hereof shall be limited to (i) in respect to each Vessel delivered the maximum vessel profit as defined in paragraph (e) of said Article 10 in effect pursuant to the provisions of said paragraph as of the day the keel of such Vessel was laid, and (ii) the payment of profit made by the Commission pursuant to the provisions of subparagraph (1) of paragraph (d) of this Article.

ARTICLE 26. Interests of Members of Congress

No member of or delegate to Congress, nor Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, except as provided in Section 116 of the Act approved March 4, 1909 (35 Stats. 1109). No member of or delegate to Congress, nor Resident Commissioner, shall be employed by the Contractor either with or without compensation as an attorney, agent, officer, or director. (Sec. 805 (e), Merchant Marine Act, 1936).

ARTICLE 27. Insurance on Vessels and Materials

Until the Vessels have been completed, physically delivered, and accepted by the Commission, the Vessels and all materials, outfitting,

equipment, and appliances to be installed in the Vessels including all materials, outfitting, equipment and appliances provided by either the Commission for and used or to be used in the construction thereof shall, at the expense of the Contractor, be kept fully insured under Builder's Risk form of policies or other usual forms of insurance, including loss or damage caused by strikers, locked out workmen, and/or persons taking part in labor disturbances, and/or riot or civil commotion in an amount at no time less than the aggregate of amounts paid the Contractor by the Commission under this agreement plus the value of any materials, outfitting, equipment, and appliances furnished by the Commission. The amount of insurance, the terms of the policies, and the insurance companies, underwriters, or underwriting funds shall at all times be satisfactory to the Commission and when approved by the Commission or its duly authorized representative in writing shall be deemed to be in full compliance by the Contractor with its obligations hereunder. All policies of insurance shall be taken out in the name of the Contractor for account of Whom It May Concern, and losses under such policies shall be made payable to the Commission for distribution by it to the Commission, or the Contractor as their respective interests may appear. All cover notes and policies, with all premiums or other charges prepaid, shall be delivered to the Commission for its approval and custody. Policies if not in conformance herewith shall be surrendered and cancelled upon direction of the Commission and new policies procured in conformance herewith. Any such policy not objected to in writing by the Commission or its representative within fifteen days after the submission thereof by the Contractor to the Commission or its representative shall be deemed to have been approved in writing by the Commission until such time as the Contractor is notified of the disapproval of such policy. In the case of any Vessel which shall have been delivered prior to the date of this contract, then there shall be deducted from the contract price otherwise payable to the Contractor hereunder the sum of \$9,000.00 for each such Vessel.

Anything herein contained to the contrary notwithstanding, the Contractor shall not be liable for any loss or damage to any Vessel or any material, machinery or equipment therefor arising from any war risk of the nature covered by war risk or war damage insurance. Any such loss or damage resulting from any war risks shall be assumed and borne by the Commission, and the Contractor shall be paid for any work, materials, machinery or equipment damaged or lost as a result of any such war risk.

ARTICLE 28. Arbitration

In the event of any dispute or difference of opinion between the parties hereto as to any matter or thing arising out of or relating to this contract, or any provision hereof, which cannot be settled between the parties themselves (except disputes as to the occurrence of an event of default under Article 23 hereof which disputes shall not be the subject of arbitration) they shall submit the matter in dispute to arbitration by three disinterested arbitrators, each of the parties hereto to choose one arbitrator and the two so chosen to choose the third arbitrator. The party desiring such arbitration shall give to the other party written notice of its desire, specifying the question or questions to be arbitrated and naming the arbitrator chosen by it.

Within a reasonable time thereafter, not exceeding twenty (20) calendar days, the other party shall give in like manner like written notice

specifying any additional questions to be arbitrated and naming the arbitrator chosen by it.

If a party hereto shall fail to appoint an arbitrator within twenty (20) calendar days after the other party shall have so given such written notice of its desire to arbitrate, the party having appointed the arbitrator may thereupon request the American Arbitration Association to appoint the arbitrator for the party in default and such Association shall thereupon appoint such arbitrator. The two arbitrators thus chosen shall then select the third. In the event that the two arbitrators chosen by or for the parties hereto fail, within ten (10) calendar days, to select the third arbitrator, the third arbitrator, upon written request of either party hereto, shall be appointed by the American Arbitration Association. Should said American Arbitration Association cease to exist or fail or refuse for a period of twenty (20) days to appoint an arbitrator after having been requested to do so by either party thereto, in the manner herein provided, then such party may request any judge of any United States Circuit Court of Appeals to appoint such arbitrator, which judge shall thereupon be fully authorized to make such appointment. The decision of any two of the three arbitrators thus chosen when reduced to writing and signed by them shall be final, conclusive and binding upon both parties hereto.

The arbitrators so appointed shall determine which party shall assume the expenses of such arbitration or the proportion of such expenses which each party shall bear; and the arbitration expenses so allocated shall be paid direct by the party or parties by which the same are directed to be paid.

ARTICLE 29. Right to Use Shipyard

Until the completion or termination of this contract, the Contractor shall have the exclusive right to use and occupy the Shipyard for the performance of work under this contract and such other contracts between the Contractor and the Commission as may provide for the use of the Shipyard. The Contractor shall be obligated to maintain the Shipyard in good working order at its own expense subject, however, to the limitations contained in an amendment to the Facilities Contract bearing even date herewith and also to pay rentals which may become due under any lease between the Contractor and any third person covering all or a portion of the land on which the Facilities are located. The right of the Contractor to use the Shipyard shall include, without limitation of the generality of the foregoing, the right to operate or cause to be operated any cafeterias, dormitories and other facilities for the use of persons employed in the Shipyard. No rental shall be charged for the Shipyard or any of said facilities, but the Contractor shall include in the cost of performing the contract work for the purposes of Article 10 hereof any losses incurred in the operation of said Facilities and shall credit any profits derived therefrom to the extent that such losses or profits are properly allocable under sound accounting practice to the cost of performing this contract. The Contractor shall pay any rentals which may become due under any lease of the site of the Facilities or portion thereof under which the Contractor is the lessee, and the Commission shall pay to the Contractor any amounts validly assessed as taxes against the Contractor because of its use and occupancy of the Shipyard, provided that any tax payments shall be made upon such conditions as will permit the validity of such tax to be contested unless the Commission shall otherwise direct.

ARTICLE 30. Guaranty Period

If, within six months after the delivery and acceptance of a Vessel, any defects in the materials or workmanship in such Vessel shall appear or be discovered, other than defects in material or workmanship due to wear or tear or to the negligence or other improper act of the operator or crew of such Vessel or to improper loading or stowage, the Contractor shall correct or repair such defective materials or workmanship at its own expense, but the liability of the Contractor hereunder shall not extend beyond the actual repair or replacement of such defective materials or workmanship and in no event shall the Contractor be liable for any consequential damages. In the case, however, of any defect in any item of machinery or equipment purchased by the Contractor which defect causes any damage to such item of machinery or equipment, the Contractor shall be obligated not only to correct or repair such defect but also to correct or repair any damage to such item of machinery or equipment caused by such defect. All work required to be performed under the provisions of this Article shall be performed by the Contractor at the Shipyard, except in the case of a Vessel which cannot conveniently be brought to the Shipyard, in which event the Contractor, in lieu of performing such work, shall pay to the Commission such sum as shall equal the cost of performing such work at the Shipyard, which payment shall completely discharge the Contractor from its obligation under the provisions of this Article in respect thereof.

The Commission shall notify the Contractor promptly of any defects, clearly specifying the same, in order that the Contractor shall have an opportunity to exercise and enforce such rights and remedies as it may have against persons who have furnished items of machinery or equipment to the Vessels.

Nothing herein contained shall impose any liability on the Contractor as a result of defects in material, machinery or equipment furnished by the Commission, and the total liability of the Contractor with respect to any Vessel shall be limited to the sum of \$40,000. In determining the Contractor's profits under the provisions of Article 10 hereof, the Commission shall include the cost to the Contractor of discharging its obligations under this Article, and in the event such liability has not been fully ascertained as of the date on which any determination of profits is made under said Article 10, the Contractor may retain from profits otherwise repayable to the Commission the sum of \$40,000 for each Vessel in respect to which the Contractor's liability has not been ascertained or such lesser sum as the Commission shall then determine and agree to be the maximum liability of the Contractor hereunder until such time as the total liability of the Contractor under this Article has been determined.

ARTICLE 31. The Vessel Contracts.

Any work performed on Vessels delivered under the First Vessel Contract and the Second Vessel Contract (other than work performed on the 62 Vessels covered by the agreement amendatory of the First Vessel Contract referred to in paragraph (3) of the preamble hereof or the delivery of said Vessels) shall be deemed to be work performed on Vessels delivered under this contract, and all payments made under the First Vessel Contract (less (i) an amount equal to the consideration to be paid under said agreement amendatory of the First Vessel Contract and (ii) to the extent the cost thereof is not allocated on the Contractor's books as of February 15, 1944, to said such

62 Vessels, the cost of materials, supplies and equipment to be furnished by the Commission under Article 4 hereof, to be purchased by the Contractor under a contract designated Contract No. MCC-35984 bearing even date herewith, between the Commission and the Contractor or which have been or are delivered to the Commission or its designee without payment to the Contractor therefor) and under the Second Vessel Contract shall be deemed to be payments made under this contract, and to the extent thereof to have discharged the liability of the Commission to make the payments provided for in Article 7 of this contract. All costs and expenses incurred for the performance of work under the First Vessel Contract (other than those incurred for work performed on the 62 Vessels) and incurred in connection with the performance of work under the Second Vessel Contract shall be deemed, for the purposes of Article 10 hereof, to be costs and expenses incurred in the performance of this contract. No reallocation of costs shall be made subsequent to the date of this contract between the work performed on said 62 Vessels under the First Vessel Contract and other work performed under the First Vessel Contract or the Second Vessel Contract or this contract subsequent to February 15, 1944. Nothing herein contained shall preclude the Commission from otherwise reallocating costs reimbursed under the First Vessel Contract and Second Vessel Contract which under sound accounting practice are not properly allocable to the performance of work under said two contracts, nor shall the Contractor's right to receive reimbursements for any costs properly allocable to any contract other than said two contracts and reimbursable under such other contracts be affected by this contract or the payment made hereunder or under the First Vessel Contract and the Second Vessel Contract. Without limitation of the generality of the foregoing and subject to the provisions of said contract bearing even date herewith, it is agreed that the Commission may charge the Contractor for all materials and supplies used in the performance of work under the First Vessel Contract and Second Vessel Contract (other than those used in the performance of work on said 62 Vessels covered by said agreement amendatory of the First Vessel Contract) not required to be furnished by the Commission under the terms of this contract and the cost of which has been reimbursed to the Contractor under any contract other than the First Vessel Contract and the Second Vessel Contract, and that in the event the Contractor shall hereafter have to make expenditures on account of liabilities incurred in the performance of work under any contract other than the First Vessel Contract and the Second Vessel Contract, the Contractor will be reimbursed the cost of discharging such liability or such portion thereof as may be properly reimbursable under the terms of such other contracts.

ARTICLE 32. Renegotiation

(a) The Commission and its Chairman have determined that the profits to be derived by the Contractor hereunder can be determined with reasonable certainty when the contract price specified was established, and has exempted this contract from the provisions of subparagraphs 1 and 2 of paragraph (b) of Section 403 of the Sixth Supplemental National Defense Appropriation Act (Public 528, 77th Congress, 2nd Session) as amended by Title VIII of Public Law 753 (77th Congress, 2nd Session) and Public Law 235 (73th Congress). It is hereby agreed that the contract price hereunder shall not be subject to renegotiation, nor shall the Commission have any right to retain amounts otherwise due the Contractor or require the repayment by the Contractor of any profits, except as hereinbefore otherwise expressly provided.

(b) In compliance with said Section 403, as amended, the Contractor shall insert in the subcontracts specified in said Section the provisions required by said Section.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

UNITED STATES MARITIME COMMISSION

By: s/ E. S. Land
Chairman

ATTEST:

s/ R. L. McDonald
Secretary

OREGON SHIPBUILDING CORPORATION

By: s/ Edgar F. Kaiser
Vice President

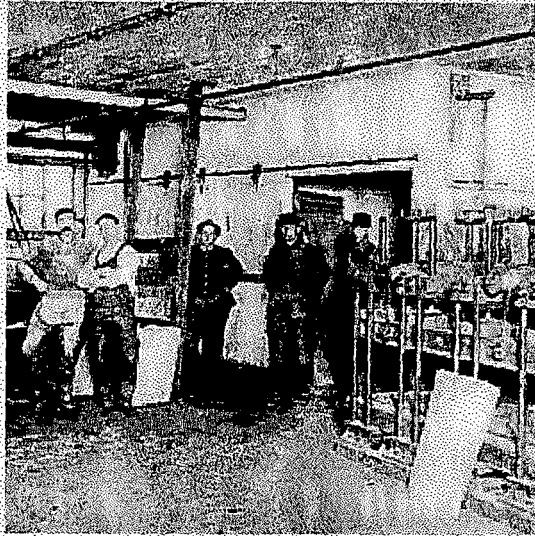
ATTEST:

S/ J. F. Reis
Secretary

Approved as to Form:

s/ Wade H. Skinner

General Counsel
U. S. Maritime Commission



PORTLAND MANUFACTURING COMPANY

No. 1

in a series of monographs on the history of plywood manufacturing



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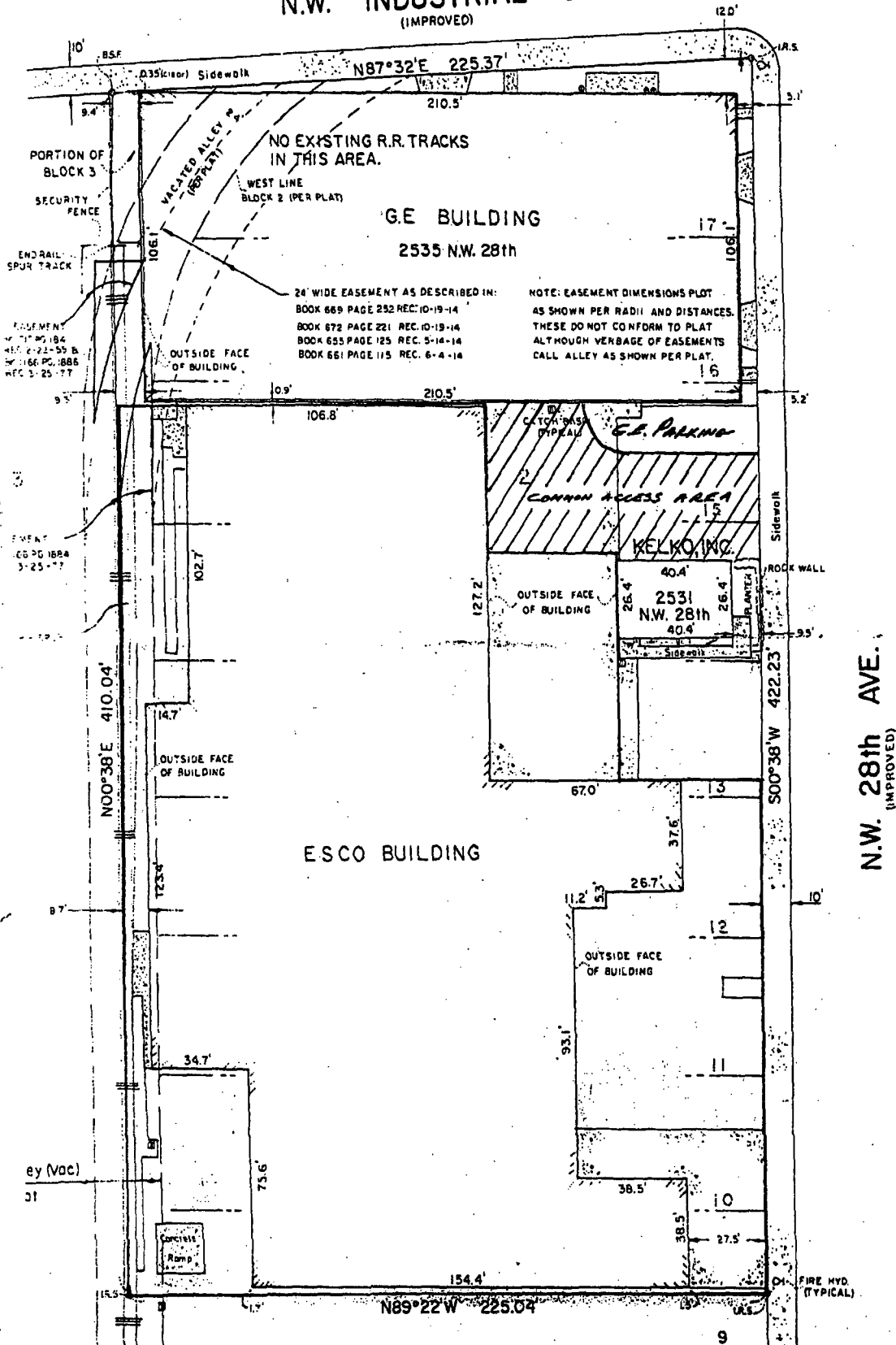
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PLYWOOD PIONEERS
ASSOCIATION

Plywood Pioneers Association
7011 So. 19th St., Tacoma, Washington 98466

SCHN00316937

N.W. INDUSTRIAL ST. (IMPROVED)



ENVIRONMENTAL FACT SHEET

LOCATION GE PCB Decommissioning Facility
Portland, Oregon LOCATION CODE Unknown
 COMPLETED BY Jim Jakubiak DATE December 10, 1997
 Year Built/Renovated 1979 or 1980 Approx Sq. Ft. 22,000
 Type of Heat Electric Type of Roof Metal

List conveyors, power hoists, trash compactors, cardboard balers, etc.:

Call Shirley Porter - GE Manager, PCB Facility

1. Water Source(s) and Use(s):

Drinking

Municipal

Yes X No

Bottled

Yes No X

Well

Yes No X

Washing

Yes X No

Fire Protection

Yes X No

Other (describe)

Yes No X

2. Wastewater Source(s) and Receptor(s):

Sanitary Sewer

Sanitary Drains

Yes X No

Roof Runoff

Yes No X

Parking lots

Yes No X

Other (describe) N/A (Not Applicable)

Yes No

Storm Sewer

Sanitary Drains

Yes No X

Roof Runoff

Yes X No

Parking lots

Yes No X

Other (describe) N/A

Yes No

Septic System

Sanitary Drains

Yes No X

Roof Runoff

Yes No X

Parking lots

Yes No X

Other (describe) N/A

Yes No

Ground

Sanitary Drains

Yes ☐ No ☒

Roof Runoff

Yes ☐ No ☒

Parking lots

Yes ☐ No ☒

Other (describe) N/A

Yes ☐ No ☐

Surface Water

Sanitary Drains

Yes ☐ No ☒

Roof Runoff

Yes ☐ No ☒

Parking lots

Yes ☐ No ☒

Other (describe) N/A

Yes ☐ No ☐

Other N/A

Sanitary Drains

Yes ☐ No ☐

Roof Runoff

Yes ☐ No ☐

Parking lots

Yes ☐ No ☐

Other (describe)

Yes ☐ No ☐

3. Storage Tank(s):

Fuel Oil

Yes ☐ No ☒

Propane/LPG (excluding forklift cylinders)

Yes ☐ No ☒

Gasoline

Yes ☐ No ☒

Other (excluding water) GE has 2 7,600 gallon
above-ground tanks containing oil with PCB's

Yes ☒ No ☐

Describe each on a separate sheet: size, age, location, contents, construction, owner, operator, active or abandoned. The ASTs are active. Call Shirley Porter, Manager, PCB Facility if you'd like additional information.

4. Oil-filled Electrical Equipment: This is a PCB Decommissioning Facility. Call Shirley Porter if you'd like additional information. This information changes with inventory.

Transformers (exclude pole-mounted at street)

Yes ☐ No ☐ (see above)

No. of PCB or unknown ☐

No. labeled "Non-PCB" ☐

Large Capacitors (in fluorescent lighting circuits, etc.)

Yes ☐ No ☐ (see above)

Other (circuit breakers, cable, etc.)

Yes ☐ No ☐ (see above)

Describe each PCB or Unknown on a separate sheet: installed or inventory for sale, type, use, location, pole or wall or pad mounted, owner, approximate age, PCB content if known. See answer above.

5. Surface Water Bodies:

On or bordering site Within 1/10 mile
 River/Creek
 Lake/Pond

Yes ☐ No ☒
 Yes ☐ No ☒

6. Asbestos:

Exposed Pipe Insulation
 Known present
 Suspect present
 Unknown
 Suspect Absent
 Known Absent

Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☒ No ☐

Hidden Pipe Insulation
 Known present
 Suspect present
 Unknown
 Suspect Absent
 Known Absent

Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☒ No ☐
 Yes ☒ No ☐
 Yes ☐ No ☒

Heating System
 Known present
 Suspect present
 Unknown
 Suspect Absent
 Known Absent

Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☒ No ☐

Air Conditioning System
 Known present
 Suspect present
 Unknown
 Suspect Absent
 Known Absent

Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☒ No ☐

Floor Tile

Known present Approximately 50 ft² of 12" by 12"
 Suspect present brown/cont vinyl floor tile
 Unknown and assoc. mastic contains
 Suspect Absent chrysotile asbestos @ less
 Known Absent than 1%. The tile is in
 the bathroom area.

Yes ☒ No ☐
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒
 Yes ☐ No ☒

Ceiling Tile	Yes	_____	No	<u>X</u>
Known present	Yes	_____	No	<u>X</u>
Suspect present	Yes	_____	No	<u>X</u>
Unknown	Yes	_____	No	<u>X</u>
Suspect Absent	Yes	_____	No	<u>X</u>
Known Absent	Yes	<u>X</u>	No	_____

Wallboard/Sheetrock	Yes	_____	No	<u>X</u>
Known present	Yes	_____	No	<u>X</u>
Suspect present	Yes	_____	No	<u>X</u>
Unknown	Yes	_____	No	<u>X</u>
Suspect Absent	Yes	_____	No	<u>X</u>
Known Absent	Yes	<u>X</u>	No	_____

Fireproofing	Yes	_____	No	<u>X</u>
Known present	Yes	_____	No	<u>X</u>
Suspect present	Yes	_____	No	<u>X</u>
Unknown	Yes	_____	No	<u>X</u>
Suspect Absent	Yes	_____	No	<u>X</u>
Known Absent	Yes	<u>X</u>	No	_____

Roofing Materials	Yes	_____	No	<u>X</u>
Known present	Yes	_____	No	<u>X</u>
Suspect present	Yes	_____	No	<u>X</u>
Unknown	Yes	_____	No	<u>X</u>
Suspect Absent	Yes	_____	No	<u>X</u>
Known Absent (Metal roof)	Yes	_____	No	<u>X</u>

7. Evidence of Contamination:

Accumulated Wastes	The site is a PCB Decommissioning Facility and stores PCB waste material.	Yes	_____	No	<u>X</u>
Paving	The facility operates under an EPA TSCA permit.	Yes	<u>X</u>	No	_____
Floors		Yes	_____	No	<u>X</u>
Soil		Yes	_____	No	<u>X</u>
Surface Water		Yes	<u>X</u>	No	_____
Adjacent Property	The facility is located in the midst of an industrial area. We assume this answer is yes.	Yes	<u>X</u>	No	_____

Large Stains	Visual outside inspection followed by telephone conversation with GE Manager, Ms. Shirlee Porter.	Yes	_____	No	<u>X</u>
Paving		Yes	_____	No	<u>X</u>
Floors		Yes	_____	No	<u>X</u>
Soil		Yes	_____	No	<u>X</u>
Surface Water		Yes	_____	No	<u>X</u>
Adjacent Property	Did not inspect - N/A	Yes	_____	No	_____

Unusual Odors

Paving

Yes ☐ No ☒

Floors

Yes ☐ No ☒

Soil

Yes ☐ No ☒

Surface Water

Yes ☐ No ☒

Adjacent Property

Did not inspect - N/A

Yes ☐ No ☐

Stressed Vegetation

Paving

Yes ☐ No ☒

Floors

Yes ☐ No ☒

Soil

Yes ☐ No ☒

Surface Water

Yes ☐ No ☒

Adjacent Property

Did not inspect - N/A

Yes ☐ No ☐

Known Spills / Releases

Paving

Yes ☐ No ☒

Floors

Yes ☒ No ☐

Soil

Yes ☐ No ☒

Surface Water

Yes ☐ No ☒

Adjacent Property

Did not inspect, but would assume this would be the case.

Yes ☒ No ☐

Test Results

Paving

Call Ms. Shirlee Porter for this information.

Yes ☐ No ☐

Floors

Yes ☐ No ☐

Soil

Yes ☐ No ☐

Surface Water

Yes ☐ No ☐

Adjacent Property

Did not obtain - N/A

Yes ☐ No ☐

Agency Investigation

Paving

The facility is a permitted PCB Decommissioning facility and is regularly inspected by regulators. Call Ms. Shirlee Porter for information.

Yes ☐ No ☐

Floors

Yes ☐ No ☐

Soil

Yes ☐ No ☐

Surface Water

Yes ☐ No ☐

Adjacent Property

Yes ☐ No ☐

RECEIVED

NOV 15 2001

GE Power Systems
OFFICE OF WASTE
& CHEM MGMT

Walter J. Peters
Energy Services Environmental Lead
518-385-3058

1 River Road
Bldg. 53 Rm. 200
Schenectady, NY 12345

November 14, 2001

Mr. Dan Duncan
United States Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

Re: Closure of Commercial PCB Storage Area – General Electric Portland Inspection and Repair
Service Center

Dear Mr. Duncan:

Enclosed is a draft copy of the Commercial PCB Storage Closure Plan for the General Electric
Service Center, Located at 2535 North West 28th Avenue, Portland, OR.

The Portland Facility retained the services of Environmental Resources Management Inc. (ERM)
to revise the Closure Plan, as part of the PCB Commercial PCB Storage Facility Application.

I look forward to speaking with you and discussing your comments on this plan and moving
forward with the formal approval to begin decontamination activities.

If you have any questions, please contact me at (518) 385-3058.

Sincerely,



Walter Peters
Energy Services Environmental Lead

SCHN00316987

DRAFT

CLOSURE PLAN

**COMMERCIAL PCB STORAGE FACILITY
APPLICATION**

PREPARED FOR:

**GENERAL ELECTRIC COMPANY
PORTLAND PCB FACILITY
PORTLAND, OR
EPA # ORD 980833537**

REVISED ACCORDING TO GE DIRECTION BY:

**ERM, INC.
1159 PITTSFORD-VICTOR ROAD
SUITE 200
PITTSFORD, NEW YORK 14534**

PROJECT NO. 4489Y.00.01

NOVEMBER, 2001

SCHN00316988

COMMERCIAL PCB STORAGE FACILITY APPLICATION

PART II (CLOSURE PLAN)

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APPENDICES

Appendix CPA	Spill Prevention Control and Countermeasure Plan
Appendix CPB	Health and Safety Plan
Appendix CPC	Presampling Visual Inspection Report
Appendix CPD	Financial Assurance

2.0 INTRODUCTION

The General Electric Company (GE) submitted a Commercial PCB Storage Application for its Portland Service Center to the United States Environmental Protection Agency (USEPA) in August 1990. This submittal included a Closure Plan prepared by Law Environmental, Inc. The application and Closure Plan were subsequently revised by ERM Northeast, Inc. and submitted to the USEPA in July 1992.

Based on observations, record reviews, and personnel interviews during the pre-sampling visual inspection, ERM has revised this closure plan to reflect the conditions that existed at the time of the inspection. Some significant changes from the 1992 revised plan include the following:

- The freon unit and liquid has been removed and disposed of at a PCB landfill and incinerator
- All PCB inventory has been removed and disposed at approved disposal facilities. Although the financial assurance and cost estimate could be revised to remove these costs, the original cost estimate has not been revised in order to demonstrate compliance with the closure cost estimate requirements in 40 CFR Part 761.
- The grid sampling proposed for outside the building has been replaced with a sampling plan that reflects actual conditions and focuses on areas that would most likely contain PCB contamination if releases had occurred in the area.
- A drum crusher is added to the list of equipment present in the processing area.

2.1 Facility Description

The commercial PCB storage facility ("facility") occupies the northern end of a steel framed, warehouse-type industrial building. The facility is not part of General Electric's Portland Service Center ("Center"), but is located one block away. The Center is engaged in the business of the repair of electrical apparatus. The facility is used to decommission transformers, and store capacitors and ballasts that contain PCBs. The facility also receives and processes boxes and drums that contain PCB's. Provision of these services requires an area in which PCB solids and liquids can

be stored while accumulating sufficient quantities necessary for shipment to an approved PCB disposal facility. The location of the facility is noted on Figure 1.

A schematic of the facility is presented on Figure 2. The facility occupies only the north half of the building. The adjoining facility to the South is utilized by General Electric for non PCB related operations and is not shown on Figure 2.

PCB-containing materials are received on the East side on 28th Avenue or the North side on Industrial St of the facility on 28th Avenue through an overhead door. Three offices are located on the North side of the facility on Industrial Road. The facility includes a 5-ton overhead crane suspended from the ceiling, a loading/unloading area that also includes pallet-mounted storage for receiving new drums and pallet-mounted temporary staging area for out-bound shipments, and the containment area. The containment area consists of drum storage, two 7,500-gallon bulk tanks, a drum crusher unit, and a freon flush distillation system with a 1,500-gallon freon flush tank. It is noted that the freon flush tank was removed in 1995. The containment area occupies approximately 4,800 square feet.

Transformer fluids are drained to the bulk tanks or drums. After the units have been drained, those that have contained greater than 500 mg/kg of PCBs are flushed with freon or 10-C oil. The flush remains in the unit for no less than 18 hours. The freon is distilled in the freon flush distillation system and reused. The still bottoms, which contain PCBs, are sent for disposal by incineration. Capacitors come into the facility by drum, boxes or loose and are shipped off-site for disposal by incineration.

PCBs are stored in the bermed containment storage area located on the west side of the building. PCBs are not treated on location. The freon flush distillation system removes PCBs from PCB-contaminated freon to allow reuse of the freon as flushate. Drums of PCB liquid are stored on pallets and moved immediately into the spill containment area.

Two above ground bulk tanks are used to store PCBs prior to their transport to a disposal facility. The maximum capacity of each of these tanks is 7,500-gallons. The tanks are constructed of cold

rolled steel and are equipped with a vapor recovery system. The tanks are designed, constructed, and operated in compliance with 29 CFR 1910.106 Occupational Safety and Health Standards. A Spill Prevention Control and Countermeasure (SPCC) Plan has been prepared (Appendix CPA) and implemented as described in 40 CFR 112.

The facility is located approximately ¼ miles from the nearest home, 3 miles from the nearest school, and ½ mile from the Willamette River. The existence of drinking water wells in the area is unknown and facility wastewater is discharged into a publicly owned treatment works. The nearest storm drain is located approximately 250 feet west of the building at the intersection of Industrial Street and NW 29th Avenue.

2.2 Facility Boundaries

The PCB storage and processing area is located at the west end of the facility in an area totally enclosed by continuous curbing, as shown in Figure 2. Areas and capacities are further described in the maximum capacity section of this text.

2.3 Facility Construction

The PCB storage facility is a concrete and steel-frame structure with a concrete slab on grade floor. The concrete has been sealed with two types of sealant on two portions of the storage area. This is due to the original storage area having been expanded a few years earlier. The original area is sealed with an impervious two-component epoxy coating known as DECO-REZ, manufactured by General Polymers Corporation. The newer portion of the storage area is sealed with a polymorphic floor sealing system, an impervious two-layer epoxy substrate and elastomer surface known as Quantum Polyester manufactured by ET Systems. The DECO-REZ flooring was prepared such that a Polymorphic sealing system bonded to provide a continuous smooth impervious flooring. Seven and one-half inch high concrete curbs enclose the facility. Walls are constructed of plywood, plasterboard, and/or concrete. A corrugated metal roof is supported by structural steel members. The facility construction totally encloses the facility and protects it from rain and precipitation.

2.4 Access/Security

The PCB storage and staging/decommissioning areas are contained within the cover of the building structure. Steel gates enclose the two service bays to restrict foot traffic when overhead doors are open. These gates remain closed whenever receiving bays are not in use. A "Centrally Monitored" security system is in use at all times when the facility is not manned or in operation. The storage facility is accessed primarily through roll-up doorway on east side and a doorway on the west side. A secondary roll-up doorway is located on the North side. Only personnel authorized by General Electric are permitted in the shop and no pedestrian access is available through the roll-up doors. Access is depicted on Figure 2.

2.5 Traffic Patterns

Truck traffic enters the facility through doorways on the eastern and northern sides of the facility from 28th Avenue or Industrial Street. Shipments to the facility usually enter through the eastern door and unload in the loading/unloading area although some large transformers are received through the northern door. Trucks carrying outgoing wastes exit the facility onto 28th Avenue and/or NW Industrial Street through one of the two overhead doors.

2.6 Topography

The facility and surrounding area is generally level at an elevation of approximately 30 feet NGVD (National Geodetic Vertical Datum of 1929). Figure 3 shows the site location on a topographic map.

2.7 100 Year Flood Plain

Figure 3 shows that the facility is located approximately 0.5 miles southwest of the Willamette River. Based on information provided by Mr. Ken McGowen, Manager of Floodplain Management Services, U.S. Army Corps of Engineers, Portland, the facility is not located in a 100-year floodplain. The site is situated in Zone C, which indicates minimum flooding hazards and no

required building restrictions. The Willamette River is also reported to have three flood control dams, therefore flooding is reported to be unlikely due to these control measures.

2.8 Spill Prevention Control and Countermeasure Plan

Because the facility stores liquid PCBs in stationary tanks, a Spill Prevention, Control and Countermeasures (SPCC) plan is required by 40 CFR 761.65(c)(7)(ii). A SPCC Plan has been prepared to satisfy 40 CFR 761.65 (c)(7)(ii) and to satisfy the oil pollution prevention regulations at 40 CFR 112. The plan is included as Appendix CPA.

3.0 CONTAINMENT CAPACITY

The PCB storage facility containment capacity is limited by the volume contained within encompassing curbing, with exceptions for temporary storage areas under 40 CFR 761.65(c) (1), qualifying pallet storage areas defined under 40 CFR 761.65(c)(2), and storage areas for drained PCB contaminated electrical equipment. The curbing in the facility is to contain at least two times the internal volume of the largest PCB article or container, or 25 percent of the total internal volume of all PCB articles and containers stored there, whichever is greater, excepting the aforementioned exceptions.

The Portland PCB storage facility is divided into two distinct areas; the temporary staging area, and the enclosed PCB drum storage area and decommissioning area. A continuous curbing, as shown on the Spill Prevention Control and Countermeasure Plan (Appendix CPA), surrounds the latter storage area.

The spill containment area meets the criteria of a storage area as prescribed in 40 CFR 761.65 (b)(1). The following items could be stored in this area:

Maximum Inventory of Waste Stored Within Spill Containment Area 40 CFR 761.65(b)(1)

	Items	Volume (gallons)	Weight (lbs)
Drums of Liquid (1)	220 drums	12,000	151,250
Drums of Solids (2)	30 drums	1,650	12,000
Bulk PCB Liquid (1)	2 tanks	15,200	190,000
Transformers (3)	350 items	14,000	875,000
Capacitors, Drums (4)	80 drums	4,400	40,000
Capacitors, Boxes (5)	50 boxes	15,000	80,000
Boxes of Solids (6)	15 boxes	4,500	15,000
PCB/Freon System (1)	1 reservoir	1,600	20,000
PCB Article Containers (7)	25 containers	1,375	12,500
PCB Articles (8)	86 articles	17,200	215,000
Loose Capacitors	40 capacitors	800	40,000
Total		87,825	1,650,750

- 1) All liquid weights based on a density for PCBs of 12.5 lb/gallon.
- 2) All solids weights based on a drum weight of 400 lbs. Up to 64 empty drums to be used in processing wastes may be stored in the spill containment area.
- 3) Transformers typically are stored with the liquid contents drained. In order to conservatively estimate the maximum inventory for closure, it is assumed that all 350 transformers are filled with PCB liquid. The weights and volumes reflect this assumption. Based on operational experience, the average volume of transformer liquid is 40 gallons and the average weight of each empty transformer is 2,000 lbs.
- 4) Assumed weight of capacitors in a drum is 500 lbs.
- 5) Assumed weight of capacitors in a box is 1,600 lbs. The capacitor box volume is 300 gallons.
- 6) Assumed weight of solids in a box is 1,000 lbs. The solids box volume is 300 gallons.
- 7) PCB Article Containers are assumed to be 55-gallon drums each weighing 500 lbs when full.
- 8) PCB Articles are assumed to have 200-gallon volume. It is further assumed that the entire volume is PCB liquid at 12.5 lb/gallon.
- 9) Loose capacitors have assumed volume of 20 gallons each, with a unit weight of 1,000 lbs.

As noted in the Spill Control and Countermeasure Plan (Appendix CPA), the dimensions of the spill containment area are 49' 4" by 97' 8". The minimum height of the berm is 7.5". The spill containment volume is 3,011.4 cubic feet or 22,525 gallons. Applying the storage volume restrictions of 40 CFR 761.65(b)(1), the largest single container cannot be larger than 11,262.5 gallons and the maximum volume that can be stored in this area cannot exceed 90,100 gallons. As noted above, the largest container is 7,600 gallons and the maximum inventory that can be stored in this area is 87,825 gallons. This storage area complies with 40 CFR 761.65(b)(1).

Additional waste materials may be stored outside of the spill containment area. 40 CFR 761.65(b)(1) allows storage for up to 30 days from the date of removal from service for various items provided a notation is attached to each item indicating the date the item was removed from service. In order to estimate the maximum inventory for closure, an estimate of the maximum number of items that may be stored in this manner is presented as follows:

Temporary Storage 40 CFR 761.65(c)(1)

	Item	Volume (gallons)	Weight (lbs)
Drums of Solids	120 drums	6,600	48,000
Boxes of Solids	28 boxes	8,400	28,000
Transformers	150 items	6,000	375,000
Articles	80 articles	16,000	200,000
Articles	50 containers	2,750	25,000
Total		39,750	676,000

(All previously stated assumptions apply)

In addition, large high voltage capacitors and PCB-contaminated electrical equipment may be stored adjacent to a storage area provided that storage space is immediately available equal to 10 percent to the volume of capacitors and equipment stored on pallets outside the facility (40 CFR 761.65(c)(2)). In order to estimate the maximum inventory for closure, an estimate of the maximum number of items that may be stored in this manner is presented as follows:

Storage on Pallets 40 CFR 761.65(c)(2)

	Item	Volume (gallons)	Weight (lbs)
Drums of Capacitors	20 drums	1,100	10,000
Boxes of Capacitors	10 boxes	3,000	16,000
Total		4,100	26,000

(All previously stated assumptions apply).

The maximum available storage volume in the Spill Containment area is 90,100 gallons, whereas the maximum volume of materials that can be stored is 87,825 gallons. The difference of 2,275 gallons is the available storage volume remaining and is greater than 10% of 4,100 gallons. Therefore, the 40 CFR 761.65(c)(2) pallet storage requirements have been achieved.

In summary, the total volume of waste stored in each of the three previously described cases would represent the maximum inventory for closure cost estimating purposes. The maximum inventory of the three cases is as follows:

Maximum Inventory for Closure

	Item	Volume (gallons)	Weight (lbs)
Drums of Liquid	220 drums	12,100	151,250
Drums of Solids	150 drums	8,250	60,000
Bulk PCB Liquid	2 tanks	15,200	190,000
Transformers (1)	500 items	10,000	1,250,000
Capacitors, Drums	100 drums	5,500	50,000
Capacitors, Boxes	60 boxes	18,000	96,000
Boxes of Solids	43 boxes	12,900	43,000
PCB/Freon System	1 reservoir	1,600	20,000
PCB Article Container	75 containers	4,125	37,500
PCB Articles	166 articles	33,200	415,000
Loose Capacitors	40 capacitors	800	40,000
Total		131,675	2,352,750

(All previously stated assumptions apply).

- 1) Weight of empty transformers is 1,000,000 lbs. 1,250,000- (12.5 x 20,000).

4.0 HEALTH AND SAFETY PLAN

A Health and Safety Plan shall be prepared for field closure activities involving potential exposures to PCBs and other materials. Prior to commencing any closure activities the Health and Safety Plan is to be verified by a qualified health and safety professional. An example of information to be contained in the plan is included in Appendix CPB.

5.0 CLOSURE PLAN SAMPLING

5.1 Introduction

Closure plan sampling activities specified in this section are timed to commence after initial inventory removal actions are complete and after initial facility vacuuming and cleaning, as described in the decontamination section. Sampling activities commence with a presampling visual inspection and proceed through both systematic and judgmental sampling to reporting. For closure cost estimating purposes, sampling activities will be conducted by a third party, and not by General Electric. Certain sampling activities are associated with decontamination activities and are thus discussed in the decontamination section; readers are advised to read that section in conjunction with this section on sampling. Also contained in the decontamination section is 1) the application of the health and safety plan to sampling activities, and 2) the identification and classification of items to be decontaminated.

5.2 Presampling Visual Inspection

5.2.1 Introduction

ERM, Inc performed a presampling visual inspection of the facility on 4 October 2001 to locate apparent areas of PCB contamination that require intensive sampling and to verify and modify the sampling plans and health and safety plans contained herein. The Presampling Visual Inspection supporting documentation are provided in Appendix CPD.

The purpose of the visual survey was to document, without limitation, areas of stains, discoloration, or other visual indications of potential contamination and areas that may potentially be contaminated due to operating patterns or locations of stored wastes. The inspection covered the entire facility, including the drum storage and process area, the loading/unloading area, the office and general storage areas, and the outside perimeter of the facility (grounds, sidewalks, entrance driveways, and adjacent roadways along the east and North sides of the building). In addition to the visual inspection, ERM reviewed facility spill reports dating from the opening of the facility and

interviewed long term employees to evaluate past spills and releases and their potential to have caused contamination at the facility.

5.2.2 Documentation

The visual survey and record review was documented by both written and photographic means. Written accounts, supplemented with photographs, were made of all structures, items, equipment, and off-site and ground surface areas inspected. Section 5.3 describes the observations suggesting the potential for contamination on specific areas of the floor. These areas are noted on applicable drawings and maps.

5.2.3 Effect on Established Sampling Plans

Upon completion of the visual survey and record review, sampling plans contained herein were verified for applicability and revised or supplemented as necessary. Sampling plan revisions or supplements use established field procedures as described herein. Safety precautions as well as site access controls were also reviewed and revised or supplemented as necessary.

5.3 Sampling Locations

As stated previously in Section 5.2, the intent of the presampling visual inspection was to identify areas that may require more intensive decontamination prior to sampling. At the conclusion of decontamination, post-cleanup sampling will be conducted to verify the cleanup activities have met the cleanup objectives. Post-cleanup sampling shall be performed in accordance with 40 CFR 761.130. A summary of the sampling program recommended in the Presampling Visual Inspection Report (Appendix CPD) is provided in Table 1 and described in the following subsections. It is important to note that judgmental samples are included in the total sample count in addition to the sample grid points, even though some of the grid points may be skewed to areas of higher contamination potential. The number of potentially required samples indicates a worst case sampling scenario for the purposes of estimating costs for financial assurance (Appendix CDC).

-Revised-
November 2001

Table 1: Sampling Verification Matrix

	Type	Location	Class*	Matrix	No. of Samples	QA/QC Samples	
						Duplicates	Field Blanks
Drum Storage / Processing Area	Systematic	Sealed Floor	LC, I, IMP	Wipe	36	2	1
	Systematic	Floor – including both side of berm	LC, I, NIMP	Chip	34	2	1
	Systematic	Walls	LC, I, NIMP	Chip	60	3	1
	Judgmental	Sealed Floor Stress Cracks **	LC, I, IMP	Wipe	10	1	1
	Judgmental	Floor stain between low-level PCB tank and north wall (1)	LC, I, IMP	Wipe	1	0	0
	Judgmental	Floor stain near north wall vertical steel support nearest high-level PCB tank (2)	LC, I, IMP	Wipe	1	0	0
	Judgmental	Floor stain 12 ft from west wall and adjacent to north wall (3)	LC, I, IMP	Wipe	1	0	0
	Judgmental	Floor stain adjacent to west wall near northwest corner of the building (4)	LC, I, IMP	Wipe	1	0	0
	Judgmental	Floor under low and high-level PCB tanks (5)	LC, I, IMP	Wipe	2	0	0
	Judgmental	Floor under former location of freon flush equipment (6)	LC, I, IMP	Wipe	2	0	0
	Judgmental	Floor under drum crusher (7)	LC, I, IMP	Wipe	1	0	0
	Judgmental	SW corner floor seam of ramp located (8,9)	LC, I, IMP	Chip	1	0	0
	Judgmental	NW end of ramp in center of the processing area (10)	LC, I, IMP	Chip	1	0	0
Loading / Unloading Area	Systematic	Floor	LC, I, NIMP	Chip	18	1	1
	Judgmental	Floor Stress Cracks **	LC, I, NIMP	Chip	3	0	0
	Judgmental	Floor stain just inside the north rollup overhead door (11)	LC, I, NIMP	Chip	1	0	0
Exterior Area	Judgmental	Concrete aprons outside the rollup overhead doors on the north and east walls of the building (13) – (16)	LC, O, NIMP	Chip	4	0	1
	Judgmental	Concrete and asphalt seam outside the rollup overhead doors on the north and east walls of the building (17) – (20)	LC, O, NIMP	Chip	4	0	0
TOTAL					181	9	5

* LC – Low contact ; I - Indoor; O – Outdoor; IMP – Impervious; NIMP – Non-impervious

** Assumed the number of additional samples required to characterize floor cracks was 15% of the number of floor samples.

5.3.1 Drum Storage and Processing Area

Systematic sampling is accomplished by establishing a coordinate or grid system for this area. Judgmental sampling is to be used to sample any stained areas and to fill in any expected data gaps from the systematic sampling. The Interior Drum Storage and Processing Area Sampling Plan is presented in Figure 4.

5.3.1.1 *Floor and Walls*

For building interior sampling, an approximate ten feet by ten feet grid was overlaid onto the floor plan. Sample points were designated at each intersection point. Sample locations designated to occur on the berm area will be skewed to a floor location adjacent to the berm towards the building interior of the drum storage area. Additional samples will be located on the opposite side for the two interior berm areas.

Each grid line is to be extended up interior walls for sampling vertical surfaces. Walls are to be sampled at two and eight feet up from the floor. As stated in the Pre-sampling Visual Inspection Report, additional sampling recommendations are provided in the following paragraphs.

In addition to the seams in the concrete floor, a large number of stress cracks were noted during the pre-sampling visual inspection. Each crack has been sealed with a floor sealant material. When the grid is overlaid onto the floor, the sample intersection points should be skewed to a crack when the intersection point falls within 2 feet of a crack.

Several stained areas on the drum storage and processing area floor were noted. If the stain is within 3 feet of a standard grid sample point, the sample point should be skewed to the stain. Otherwise an additional sample point should be added. One sample of the floor should be taken from the each of the following locations as depicted on Figure 4, unless otherwise noted:

- (1) the darkened area reported as compressor oil located between the low-level PCB tank and the north wall;

- (2) the stain near the north wall vertical steel support nearest the high-level PCB tank;
- (3) the stain approximately 12 feet from the west wall and adjacent to the north wall;
- (4) the stain adjacent to the west wall near the northwest corner of the building;
- (5) under the two PCB storage tanks;
- (6) under the previous location of the freon flush equipment; and
- (7) under the drum crushing equipment.

The main structure of the overhead crane is located approximately 16 to 20 feet above the processing area. Therefore it is very unlikely to have been in contact with PCBs and sampling of the crane body is not necessary. The crane hook and sling will be disposed of at an approved PCB landfill therefore this equipment will not be sampled.

5.3.1.2 Southeast Corner Ramp

One sample should be taken at the floor seam of the southwest corner ramp where a sampling grid line intersects the ramp. If the grid line does not intersect the ramp, an additional sample should be taken along the seam on the north side of the ramp. These sample locations are depicted as (8) and (9) on Figure 4.

5.3.1.3 Process Area Ramp

One sample should be taken from the NW end of the ramp located in the middle of the current process area. If the seam is within 3 feet of a standard grid sample point, the sample point should be skewed to the seam. Otherwise an additional sample point should be added. This sample location is depicted as (10) on Figure 4.

5.3.2 Loading/Unloading Area

Systematic sampling is accomplished by establishing a coordinate or grid system for this area. Because the area was not used to store or process PCBs and there were no historical indications of PCB spills, a twenty foot grid system is specified for sampling to determine if potential PCB

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contamination exists. Judgmental sampling is to be used to sample any stained areas and to fill in any expected data gaps from the systematic sampling. The Staging Area and Building Exterior Sampling Plan are presented in Figure 5.

5.3.2.1 Floor

For building interior sampling, an approximate twenty feet by twenty feet grid was overlaid onto the floor plan. Sample points were designated at each intersection point. The starting sample grid points for the floor begin within 3 inches of the south and west walls. As stated in the Presampling Visual Inspection Report, additional sampling recommendations are provided in the following paragraphs.

In addition to the seams in the concrete floor, a large number of unsealed stress cracks were noted during the presampling visual inspection. When the grid is overlaid onto the floor, the sample intersection points should be skewed to a crack when the intersection point falls within 2 feet of a crack.

Just inside the north rollup overhead door, one sample should be taken of the stained and chipped area. The stain is reported to be coffee discarded from the adjacent office. The standard grid sample point should be skewed to include the stained area if it is within 5 feet of the stain. Otherwise an additional sample should be taken. This sample location is depicted as (11) on Figure 5.

5.3.2.2 Elevated Office Building

The sample grid will be skewed to sample at locations outside of the office areas identified as (12) on Figure 5.

5.3.3 Exterior Area

The weather was clear and dry during the presampling visual inspection so surface puddles were not present nor were there obvious signs of puddles in the vicinity. The ground adjacent to the building sloped toward the road to a low point at the edge of the asphalt. Surface runoff or spills will collect in this area and flow down the street. There were no catch basins or storm drain entrances observed near the building. On both NW 28th street and Industrial Street there were utility manhole covers present near the crown of the road, but they were up-gradient from storm water drainage and are not in an area where puddles or spills would collect or runoff would be channeled. The nearest observed storm drain grate is approximately 250 feet away from the facility. Because runoff and spills will all drain to the low area bordering the road on each side of the facility, a grid system is not used to determine sample locations. Instead, the following judgmental samples will be collected in areas that are the most likely to exhibit contamination if any exists outside the building:

5.3.3.1 *Concrete Aprons*

Concrete aprons are located on the exterior of the Loading/Unloading Area's east and north rollup overhead doors. Two samples should be collected on the concrete aprons in front of each rollup overhead door. These sample locations are depicted as (13) through (16) on Figure 5. Two additional chip and sediment samples, spaced twenty feet apart, should be collected in the seam between the concrete apron and the asphalt in front of each rollup overhead door. These sample locations are depicted as (17) through (20) on Figure 5. No additional exterior samples should be collected.

5.4 Sampling Timing

Sampling activities are timed to commence after all inventory has been removed from the facility and after all waste process equipment has been removed from the facility. After these removal activities, the facility is to be vacuumed and washed as further described in the decontamination text.

5.5 Sampling Procedures

5.5.1 Introduction

Upon arrival at the facility, a team leader will be designated to lead, coordinate and complete sampling activities. Daily field logs listing on-site personnel, general activities descriptions, list of samples collected, hours on-site and other relevant information will be maintained.

Safety equipment will be worn during sampling activities as described in the health and safety plan. Sampling activities will be performed under established and approved health and safety procedures that meet or exceed applicable OSHA requirements.

Waste materials generated during sampling activities will be drummed and labeled for proper disposal. The field team leader will make arrangements for transportation and disposal of these waste materials as required. Manifests will be prepared by the field team leader for review and approval by appropriate authorities. Any Certificates of Disposal received back by the team leader will be retained for forwarding to General Electric.

5.5.2 Equipment Decontamination

Upon arrival at the site, an equipment decontamination area (decon area) will be set up in a convenient location near a source of potable water. The decon area will be covered with a triple layer of plastic sheeting or equivalent impervious barrier with sufficient strength and puncture resistance to ensure that decontamination activities will not produce fluids that touch any non-impervious ground surfaces. The decon area will include a trough for steam cleaning and a rinse area for small equipment. In order to reduce the potential for cross contamination all equipment will be thoroughly decontaminated between sampling locations. If removal of contaminated debris or soil is necessary, a large metal trough will be used for steam cleaning potentially contaminated parts of transport trucks and excavating equipment. Liquids and solids generated during decontamination will be contained in 55-gallon drums for subsequent disposal, pending analytical results.

In order to save time and decontamination materials and to reduce the amount of decon liquids and solids produced for disposal, whenever practical a number of each sample tool will be used so that many samples can be collected between decontamination episodes.

5.5.3 Surface Wipe Sampling

Wipe sampling will be performed, as specified in 40 CFR 761.123, on various solid surfaces that are smooth, hard and impervious (nonporous). A standard-size template (10 centimeters x 10 centimeters) will be used to delineate a standard sized area to be sampled. A gauze pad saturated in hexane will be used to thoroughly wipe the area delineated by the template. The pad will be wiped across the entire area twice. The second wipe will be at a right angle to the first. The gauze pad will be prepared with hexane in the laboratory and stored in a sealed glass vial until it is used for the wipe test. The wipe will be performed quickly placed back into the vial, and placed on ice in a thermally insulated cooler for delivery to the laboratory.

5.5.4 Chip Sampling

Representative chip samples will be collected using a chisel at the selected sample point. Approximately 4 ounces of the material will be collected for analysis of each sample. The sample will be placed on ice in a thermally insulated cooler for delivery to the laboratory.

5.6 Documentation

5.6.1 Introduction

In order to adequately document the sampling efforts the following records will be kept:

- sample codes
- field log book
- field map with approximate locations

- chain-of-custody forms

5.6.2 Sample Codes

Each sample when collected shall be assigned a unique sample code. The label will correspond to this code. It will be used for all references to that sample. The first part of the code will be three digits representing the facility number (FAC). The second part of the sample code will be two letters indicating the type of sample location as follows:

CP Chip Sample
WP Wipe Sample

The next number will be assigned according to the order in which the sample was taken. For example, the first wipe sample will be FAC-WP-1.

5.6.3 Field Log Book and Field Forms

A field log will be kept to record daily activities as performed. The field log book will be made of water resistant paper and equivalent to a survey level book. All entries will be made in pencil or ink, with no erasures allowed. If a mistake is made, it will be marked through. The field team leader will be responsible for the field log book. Entries into the log book will be accompanied by time of entry. All pertinent sample information will be recorded in the field book and the proper field forms. The following information is to be recorded at each sampling location, when appropriate:

Day/Date/Time
Weather conditions
Sample Type
 Chip
 Wipe
 Decon Sample
 Water
 Solvent
Air temperature
Ground water sample
 Condition of the monitoring well

Depth to the surface of the ground water
Depth to the bottom of the well
Existence of a separate phase
Volume of ground water purged
Sampling team members
Type of sampling equipment used
Flow rate of seepage or stream
Physical properties of the sample:
 color
 texture
 odor
 turbidity
Types of sample jars and preservation used
Procedures for disposal of purge water
Decontamination and cleaning procedures for equipment used at more than one location

5.7 Sample Handling

Sample containers will be labeled in a legible fashion that should remain clear even when wet. The labels will, at minimum, exhibit the following information:

- Sample identification number (ID)
- Date and time of collection
- Analyses required
- Collector's name

To prevent the labels from getting wet and to contain any breakage during shipment, each set of sample containers will be placed in zip-lock bags prior to being placed in the sample shipper, (e.g. cooler, styrofoam box, etc.). For those containers where the labels cannot be read once the container is prepared for shipment, the sample ID, date and time can also be recorded on the outer zip-lock bag with an indelible marker. Once the samples are prepared for shipment in the sample shippers, the shippers will be sent to the laboratory by independent means (e.g. air freight, UPS, etc.). Samples requiring refrigeration will be packed with "blue ice" or bagged ice upon collection and maintained at 4°C. The shipping containers will be appropriately labeled and will conform to

applicable U.S. Department of Transportation standards. A chain-of-custody form will be used to document the custody and handling of each sample. This form will also act as a sample analysis request form.

5.8 Quality Assurance/Quality Control

5.8.1 Introduction

The objective of the Quality Assurance/Quality Control Program is to provide for collection of data that are scientifically valid and of known and adequate precision and accuracy. The team leader or the laboratory manager, as appropriate, will maintain a continuous verification of the quality of data generated by its staff and its subcontractors.

5.8.2 Field Procedures

Field work will be conducted in general accordance with the procedures described herein or as otherwise clearly documented. Particular attention will be directed toward limiting the possibility of cross contamination. Field work will be documented using site photographs, a field book, the appropriate sampling forms and chain-of-custody records. Site representatives will perform work in accordance with health and safety procedures that meet or exceed applicable OSHA requirements and as specified in the health and safety plan.

5.8.3 Quality Assurance/Quality Control (QA/QC) Samples

In order to meet the goals of the QA/QC program, QA/QC samples will be collected and analyzed. QA/QC samples to be collected include field duplicates, trip blanks, and equipment (rinsate) blanks.

5.8.4 Collection of Duplicates and Blanks

Field duplicates will be collected as a check on laboratory accuracy and precision. They will be sampled by filling separate containers with two samples from the same source.

An equipment blank (rinsate) is designed to address potential cross-contamination in the field between sample sources due to deficient field cleaning procedures. This blank also addresses field preservation procedures, environmental site interference, integrity of the blank source water for field cleaning and those concerns not singularly addressed by the trip blank. An equipment blank (rinsate) will be prepared once per day for each piece of sampling equipment that was employed for sample collection and which was decontaminated in the field for use in additional sampling. The equipment blank will be prepared in the field by collecting in the appropriate container for the parameter groups, a water rinse from the equipment (bailer, pump, tubing, spoon, auger, etc.) after execution of the last step of the proper field decontamination protocol.

A trip blank is designed to address interference derived from improper sample container cleaning preparation, contaminated blank source water, samples cross-contaminated during storage/transport, and extraneous environmental conditions affecting the sampling event to and from the site, including delivery to the analyzing laboratory. Trip blanks will be prepared by the laboratory in the appropriate sample container using blank source water. They will then be sealed and stored in the ice chest where site material samples will be stored and transported.

5.8.5 Frequency

One field duplicate will be taken for every 20 samples of each matrix. If there are less than 20 samples per matrix one duplicate will be collected. A rinsate blank will be taken for each sample phase. A sample phase is defined as a period of sampling in one matrix, not to exceed one day. One trip blank will be obtained each day for water samples.

5.8.6 Chain-of-Custody

To document sample possession from the time of collection until the sample has been received by the laboratory's sample custodian, a Chain-of-Custody Record will be completed by the field personnel and accompany every sample shipment. While in the field, the care and custody of the samples will be the field sampler's responsibility until they are transferred or properly dispatched.

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This chain-of-custody procedure will be followed during all sampling assignments, regardless of the ultimate use of sample data.

To provide for proper identification in the field and proper tracking in the laboratory, all samples will be labeled in a clear and consistent fashion. Sample labels are to be waterproof and to have a pre-assigned unique number. Field personnel will maintain a permanently bound field notebook. This notebook must be water resistant with sequentially number pages. Field activities will be recorded in ink or pencil. The notebook along with the Chain-of-Custody Record will contain sufficient information to allow reconstruction of the sample collection and handling procedures at a later time.

Each sample will have a corresponding notebook entry that includes:

- A Unique Sample I.D. Name or Number
- Date and time of collection
- Sample type (composite or grab)
- Analyses for which sample was collected
- Method of preservation
- Additional comments as necessary

Each sample must have corresponding entry on a Chain-of-Custody Record. The form is to include:

- Site name
- The unique sample I.D. name or number
- Sample type
- Date and time of collection
- Number of containers
- Parameters for which analyses are requested
- Signature of sampler(s)
- Signature of persons involved in the chain-of-custody and inclusive dates and times of possession
- Condition of samples upon arrival at the laboratory

The Chain-of-Custody Record for a given sample is to be completed before sampling is initiated by the same sampling team at the next location.

5.8.7 Data Evaluation & Report Preparation

During and after each significant phase of field work the data base will be updated and reevaluated as necessary. Subsurface data collected in the field and laboratory analyses will be summarized and used to prepare lithologic boring logs and data presentations, (e.g., well diagrams, hydrogeologic cross sections, potentiometric surface maps, analytical tables, and figures, etc.). After evaluation of the data, a report will be prepared describing all activities and disclosing all results and analysis.

5.9 Laboratory Analytical Requirements

Analytical methods and practical quantitation limits will comply with requirements presented in the following: Test Methods for Evaluating Solid Waste (Physical/Chemical Analysis of Municipal and Industrial Wastewater), Method 8080, or current method at time of closure in addition to other requirements at the time of closure.

5.10 Decontamination

5.10.1 Introduction

During closure, all areas and structures comprising the storage facility are to be decontaminated. The cleanup levels to be achieved are those specified herein, or as according to the PCB Spill Cleanup Policy (40 CFR 761.120). To achieve the objectives of the Policy, both numerical and performance standards are to be applied.

5.10.2 Numerical Standards

Numerical standards designate cleanup levels that are verified by sampling and laboratory analysis. Target decontamination concentration levels, using the classifications contained in the Spill Cleanup Policy as of 2001, are as follows:

- High contact outdoor solid surface should be cleaned to 10 micrograms/100 cm² (as measured by wipe test);
- Low contact, outdoor, impervious solid surfaces should be cleaned to 10 micrograms/100 cm² (wipe test);
- Low contact, outdoor, non-impervious solid surfaces should be cleaned to (1) 10 micrograms/100 cm² or (2) 100 micrograms/cm² and encapsulated (though two options are available, EPA retains final authority to disallow the encapsulation option);
- PCB contaminated soil should be removed to 10 ppm, provided that soil is excavated to a minimum depth of 10 inches. The excavated soil should be replaced with clean soil (less than 1 ppm PCBs);
- Low contact, indoor, impervious solid surfaces should be cleaned to 10 micrograms/100 cm² (wipe test);
- Areas not otherwise specified, as provided in the Spill Cleanup Policy, 40 CFR 761.120.

Surface area and item classifications for this facility, such as high contact, outdoor, etc., are presented in Figure 6.

5.10.3 Performance Standards

Performance standards are work practices that provide for decontamination. Performance standards may be used to supplement numerical standards, as follows:

- Moveable equipment, not considered to be a high contact item, used in the storage area may be decontaminated by swabbing surfaces with a PCB free solvent with a solubility of PCBs of at least five percent by weight. Example of such equipment include the overhead crane, (drum handling equipment, and hand tools. (40 CFR 761.79(b))

5.10.4 Facility Preparation

Prior to closure activities, General Electric or its designee will vacate the storage area and ship all existing inventory to an approved storage or disposal facility as described in the disposal text. The

decontamination contractor will then containerize any remaining debris, including any remaining waste process systems, and store the containerized debris until disposal can be arranged. The facility may then be considered prepared for decontamination activities.

5.10.5 Application of Health and Safety Plan

A Health and Safety Plan is to be prepared in accordance with applicable OSHA regulations before any closure activities begin. An example of the information to be included is contained in Appendix CPB. Work areas will be clearly marked using a warning tape or ribbon. Areas will be laid out to include a "Red Zone" for potentially contaminated areas and a "Contamination Reduction Zone" (CRZ) as a buffer. Only personnel that are briefed on the Health and Safety Plan and trained in accordance with OSHA regulations will be allowed to enter the "Red Zone" and the "Contamination Reduction Zone".

The Contamination Reduction Zone will be bermed around the edges and lined with visqueen, or equivalent impermeable barrier, to collect surface water. All water and visqueen will be drummed for approved disposal. Any storm drains located within the zone will be sealed and blocked watertight.

Plastic sheeting will be hung on the inside of temporary fences surrounding suspected or known contaminated areas as determined during the initial visual inspection. Absorbent pads will be placed at the entrance of all work areas or at other strategic locations. The outside of the fence will be marked at the Red Zone. After the decontamination is complete, the plastic sheeting and absorbent pads will be drummed for disposal.

5.10.6 Initial Decontamination

An initial decontamination process shall consist of dry vacuuming all surfaces. The vacuum equipment shall be equipped with appropriate filters that preclude discharge of dusts and particular matter. The vacuuming operation shall be performed so as to remove particulate and loose material from the contaminated surfaces including, without limitation, floors, walls, curbing, light fixtures,

conduit, and structural steel members above. Vacuuming shall be supplemented by scraping and shipping to remove encrusted materials.

A second decontamination process shall consist of washing with water and a biodegradable solvent cleaner-degreaser, such as "Citrikleen" by Penetone Corporation or similar solvent. All wash water shall be captured and placed in 55-gallon metal drums.

The standard to be achieved by these initial decontamination operations is removal of surface accumulations and stains, as determined by wiping the cleaned surface with a white cloth and observing material on the cloth. The initial decontamination should be followed by comprehensive systematic sampling on a coordinate grid system as described in the Section 5.3.

If contamination is found to be present following the comprehensive sampling, concrete flooring will be cleaned with an industrial floor cleaning machine using Alconox or equivalent as a detergent as described below. If there is no contamination above the specified standards, then the decontamination is considered complete. For continuing decontamination, example specifications for the cleaning machine include: 3Hp motor, 220 volt and silicon carbide wheel. This machine will be rented locally. The machine will be decontaminated with a steam cleaner prior to removal from the site. Water and detergents or solvents from these cleaning operations will be directed to containment areas, such as a collection pit, using squeegees. A wet/dry shop vacuum will be used to remove water from the containment areas. If enough water collects, a sump pump may be used to remove water more quickly during washing and rinsing.

The concrete will be rinsed using potable water distributed by a water hose, portable hand pump or steam cleaner. The pad will be rinsed three times using the following sequence:

1. Steam clean pad and curb.
2. Direct water to collection pit with new mops and squeegees.
3. Transfer water from collection sump to DOT approved drums, using a wet/dry shop vacuum and/or sump pump.

4. Sample each drum using a glass tube.
5. Steam clean any collection pit, trough, or other containment means. Drum all of the rinse water.
6. Resample using judgmental techniques, resampling those areas where prior sampling indicated contamination.

Disposable equipment such as mops, squeegees, buckets, safety gear, and plastic sheeting will be drummed for disposal at a TSCA approved hazardous waste landfill. Reusable equipment such as the floor cleaner, shop vacuum, sump pump, and boots will be decontaminated in the CRZ and removed.

All drummed wastes, including rinse water from structure surfaces, debris, and contaminated equipment will be labeled as to contents and stored in a temporary on-site storage area pending laboratory analyses.

5.10.7 Post Initial Decontamination Sampling Analyses

5.10.7.1 Purpose

Samples are to be taken of the following materials and analyzed for residual PCB contamination if the initial decontamination measures fail to achieve specified cleanup standards. The data is to be used by General Electric to determine future facility reuse restrictions or disposal or demolition alternatives.

5.10.7.2 Building Walls

Based on the post-initial cleanup judgmental sample results, two additional sample locations on each masonry wall will be identified where residual contamination remains. At each location, the contractor is to chip sample the masonry material at increasing depths, or in the alternative, core the material to indicate extent and depth of any residual contamination.

5.10.7.3 Concrete

Based on the sample results, locations for additional sampling will be determined. At each location, the contractor shall take a cylindrical core by diamond bit coring techniques through the full slab thickness. Cores shall be of at least two-inch diameter.

If cracks in concrete have failed the wipe tests, concrete cores and soil samples (to depths of 3 feet below subgrade) will be taken at the location of each crack and analyzed.

Concrete core samples are to be sliced in one inch horizontal layers and tested separately to evaluate the vertical extent of contamination through the concrete. If the lower slice contains levels of contamination exceeding the cleanup criteria, then soil samples beneath the concrete will be analyzed at increasing depth and compared to the specific cleanup criteria. Results are to be used to determine whether floor demolition and subfloor soil removal is necessary.

5.10.7.4 Drums and Containers

Drums or other containers that contain soil, water, drilling fluids, and debris from closure activities, including assessment and decontamination, will be stored in a protected location such as in the building or CRZ zone. From each drum or container an 8-ounce representative sample shall be taken and placed in a new glass jar, labeled, and entered on a Chain-of-Custody form, and analyzed to determine an appropriate disposal method.

5.10.7.5 Analysis

All samples on the Chain-of-Custody form shall be shipped to a laboratory for PCB analyses. The closure contractor shall instruct the laboratory to transmit a copy of all results of analyses directly to General Electric, or its designee, including, without limitations, the methods of analyses used and preservation techniques used during shipment.

5.11 Closure Schedule

Closure activities commence, for the purpose of closure scheduling, 30 days after the last day that PCB's or PCB items are received at the facility. Thirty days prior to that final receipt date, notification of the commencement of closure activities is to be given to the U.S EPA.

The closure schedule and specific closure activities are as follows:

<u>Task</u>	<u>Deadline</u>
1. Notify U.S. EPA of intent to proceed with closure	30 days prior to final receipt of PCB's or PCB items
2. Final receipt of PCB's or PCB items	60 days (maximum of 90 days) after final receipt of PCB's or PCB items.
3. Start of closure activities	30 days after final receipt of PCB's or PCB items.
4. Complete removal of PCB inventory	60 days (maximum of 90 days) after final receipt of PCB's or PCB items.
5. Initial presampling visual inspection.	92 days after final receipt of PCB's or PCB items.
6. Site sampling phases.	120 days after final receipt of PCB's or PCB items.
7. Decontamination phases.	160 (270) days after final receipt of PCB's or PCB items.
8. Complete closure activities in accordance with approved plan.	180 days after final receipt of PCB's or PCB Items.
9. Submit Closure Certification Report	240 days after final receipt of PCB's or PCB items.

5.12 Disposal

5.12.1 Maximum Inventory at Closure

The maximum inventory estimate for closure is divided into 2 portions for the Portland facility: The amount of waste stored within the spill containment area and the amount of waste stored

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adjacent to the spill containment area. The spill containment area meets the criteria of a storage area as prescribed in 40 CFR 761.65(b)(1). The following items could be stored in this area:

Maximum Inventory of Waste Stored Within Spill Containment Area 40 CFR 761.65 (b) (1)

	Items	Volume (gallons)	Weight (lbs)
Drums of Liquid (1)	220 drums	12,000	151,250
Drums of Solids (2)	30 drums	1,650	12,000
Bulk PCB Liquid (1)	2 tanks	15,200	190,000
Transformers (3)	350 items	14,000	875,000
Capacitors, Drums (4)	80 drums	4,400	40,000
Capacitors, Boxes (5)	50 boxes	15,000	80,000
Boxes of Solids (6)	15 boxes	4,500	15,000
PCB/Freon System (1)	1 reservoir	1,600	20,000
PCB Article Containers (7)	25 containers	1,375	12,500
PCB Articles (8)	86 articles	17,200	215,000
Loose Capacitors	40 capacitors	800	40,000
Total		87,825	1,650,750

- 1) All liquid weights based on a density for PCBs of 12.5 lb/gallon.
- 2) All solids weights based on a drum weight of 400 lbs. Up to 64 empty drums to be used in processing wastes may be stored in the spill containment area.
- 3) Transformers typically are stored with the liquid contents drained. In order to conservatively estimate the maximum inventory for closure, it is assumed that all 350 transformers are filled with PCB liquid. The weights and volumes reflect this assumption. Based on operational experience, the average volume of transformer liquid is 40 gallons and the average weight of each empty transformer is 2,000 lbs.
- 4) Assumed weight of capacitors in a drum is 500 lbs.
- 5) Assumed weight of capacitors in a box is 1,600 lbs. The capacitor box volume is 300 gallons.
- 6) Assumed weight of solids in a box is 1,000 lbs. The solids box volume is 300 gallons.
- 7) PCB Article Containers are assumed to be 55-gallon drums each weighing 500 lbs when full.
- 8) PCB Articles are assumed to have 200 gallon volume. It is further assumed that the entire volume is PCB liquid at 12.5 lb/gallon.
- 9) Loose capacitors have assumed volume of 20 gallons each, with a unit weight of 1,000 lbs.

As noted in the Spill Control and Countermeasure Plan (Appendix CPA), the dimensions of the spill containment area are 49' 4" by 97' 8". The minimum height of the berm is 7.5". The spill containment volume is 3,011.4 cubic feet or 22,525 gallons. Applying the storage volume restrictions of 40 CFR 761.65(b)(1), the largest single container cannot be larger than 11,262.5

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gallons and the maximum volume that can be stored in this area cannot exceed 90,100 gallons. As noted above, the largest container is 7,600 gallons and the maximum inventory that can be stored in this area is 87,825 gallons. This storage area complies with 40 CFR 761.65(b)(1).

Additional waste materials may be stored outside of the spill containment area. 40 CFR 761.65(b)(1) allows storage for up to 30 days from the date of removal from service for various items provided a notation is attached to each item indicating the date the item was removed from service. In order to estimate the maximum inventory for closure, an estimate of the maximum number of items that may be stored in this manner is presented as follows:

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Temporary Storage 40 CFR 761.65(c)(1)

	Item	Volume (gallons)	Weight (lbs)
Drums of Solids	120 drums	6,600	48,000
Boxes of Solids	28 boxes	8,400	28,000
Transformers	150 items	6,000	375,000
Articles	80 articles	16,000	200,000
Articles	50 containers	2,750	25,000
Total		39,750	676,000

(All previously stated assumptions apply)

In addition, large high voltage capacitors and PCB-contaminated electrical equipment may be stored adjacent to a storage area provided that storage space is immediately available equal to 10 percent to the volume of capacitors and equipment stored on pallets outside the facility [40 CFR 761.65(c)(2)]. In order to estimate the maximum inventory for closure, an estimate of the maximum number of items that may be stored in this manner is presented as follows:

Storage on Pallets 40 CFR 761.65(c)(2)

	Item	Volume (gallons)	Weight (lbs)
Drums of Capacitors	20 drums	1,100	10,000
Boxes of Capacitors	10 boxes	3,000	16,000
Total		4,100	26,000

(All previously stated assumptions apply).

The maximum available storage volume in the Spill Containment area is 90,100 gallons, whereas the maximum volume of materials that can be stored is 87,825 gallons. The difference of 2,275 gallons is the available storage volume remaining and is greater than 10% of 4,100 gallons. Therefore, the requirements for pallet storage of 40 CFR 761.65(c)(2) have been achieved.

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In summary, the total volume of waste stored in each of the 3 previously described cases would represent the maximum inventory for closure cost estimating purposes. The maximum inventory of the 3 cases is as follows:

Maximum Inventory for Closure

	Item	Volume (gallons)	Weight (lbs)
Drums of Liquid	220 drums	12,100	151,250
Drums of Solids	150 drums	8,250	60,000
Bulk PCB Liquid	2 tanks	15,200	190,000
Transformers (1)	500 items	10,000	1,250,000
Capacitors, Drums	100 drums	5,500	50,000
Capacitors, Boxes	60 boxes	18,000	96,000
Boxes of Solids	43 boxes	12,900	43,000
PCB/Freon System	1 reservoir	1,600	20,000
PCB Article Container	75 containers	4,125	37,500
PCB Articles	166 articles	33,200	415,000
Loose Capacitors	40 capacitors	800	40,000
Total		131,675	2,352,750

(All previously stated assumptions apply).

- 1) Weight of empty transformers is 1,000,000 lbs. 1,250,000- (12.5 x 20,000).

5.12.2 Inventory Disposal

As used in the following text, all regulatory citations refer to 40 CFR Section 761, as amended by 54 Fed. Reg. 52746 (Dec. 21, 1989), or the effective regulations in force at the time closure activities are commenced.

Inventory on hand at the time closure activities commence will be removed from site for disposal within 60 days. This schedule will insure that all inventory is removed within 90 days after final

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receipt of PCB's or PCB items. Inventory disposal will be conducted in accordance with 40 CFR 761.60.

The PCB inventory to be disposed of at the time of closure is projected to consist of the following types of PCB items: PCB drums (liquids, solids, and capacitors), bulk liquid, transformers, and articles generated during decontamination. A detailed description of the quantities used for planning purposes is given in the section entitled "Maximum Inventory at Closure".

The empty transformers are projected to be disposed of in a chemical waste landfill that complies with 40 CFR 761.75. Prior to disposal, these are to be drained in accordance with 40 CFR 761.60. Specifically, PCB transformers are to be drained of free flowing liquid, filled with a solvent such as, freon, diesel, or 10-C oil in which PCBs are readily soluble, allowed to stand for at least 18 hours and drained thoroughly. Both the PCB liquids initially drained from the transformers, and the solvent will be collected, drummed, and/or tankered for incineration. For closure costs estimating purposes, decommissioning will be conducted by a third party, and not by General Electric.

The chemical waste landfill used as a basis for closure cost estimating is the Envirosafe landfill in Boise, Idaho.

This disposal facility is specified for planning purposes to allow estimation of disposal costs according to current market rates.

The bulk liquids, PCB liquid and solvents drained from the transformers and capacitors will be disposed of by incineration at an incinerator which complies with 40 CFR 761.60. The incinerator used as a basis for closure cost estimating is the (APTUS facility in Coffeyville, Kansas (EPA ID No. ASD981506025).

This disposal facility is specified for planning purposes to allow estimation of disposal costs according to current market rates.

5.12.3 Equipment Disposal

Equipment to be disposed of at closure, in addition to the PCB inventory, consists of two 7,500 gallon bulk storage tanks, a pump for each tank, and associated piping used for filling and emptying the tanks. It is again noted that the freon system has previously been removed and from the facility and disposed at a permitted disposal facility. The bulk storage tanks will be emptied into tanker trucks and the PCB liquids will be disposed of at the incinerator. Any free flowing liquids which cannot be pumped out of the tanks, piping, or pumps will be allowed to drain to a sump area and transferred to 55 gallon drums for disposal by incineration (see Inventory Disposal section above for specific incineration facility). Any sump areas will be coated in plastic sheeting prior to draining residual liquids from the tanks. The "Inventory Disposal" section gives the specific landfill facility used for planning purposes. The pumps and piping will be drummed for shipment to the landfill. The bulk storage tanks and the dismantled by cutting into 10 foot x 10 foot maximum sections, bundled, wrapped in plastic, and shipped to a permitted disposal facility. For closure cost estimating purposes, these activities will be conducted by a third party, and not by General Electric.

5.12.4 Disposal of Decontamination Materials

Wastes generated during facility decontamination will be stored within the subject storage facility until final disposal, excepting certain temporary storage allowance. At the time of closure, storage of the facility decontamination materials will be in compliance with applicable storage requirements.

The following types and quantities of waste materials are expected to be generated during facility decontamination:

Solid residues collected by vacuuming	3 drums
Disposable equipment and safety gear	4 drums
Soil cuttings from soil sampling	2 drum
Disposable equipment and safety gear	4 drums
Soil Cuttings from soil sampling	1 drum
Initial facility wash water	19 drums

Wash and rinse water for floor cleaning	4 drums
Personnel decontamination water	18 drums
Decontamination fluids for reusable sampling equipment	3 drums
Decontamination fluids from equipment disposal	3 drums

The first five items will be disposed of at the chemical waste landfill specified in the Inventory Disposal section of this document. The final five items will be disposed of by incineration at the facility described in Inventory Disposal.

5.12.5 Waste Management During Closure

PCB inventory will be managed during closure so that the storage facility, transporter, and disposal facility are all in compliance with 40 CFR 761, Subpart K, PCB Waste Disposal Records and Reports. Specifically these regulations address EPA identification number (40 CFR 761.202), notification of PCB waste activity (40 CFR 761.205), the manifest requirements (40 CFR 761.207), use of the manifest (40 CFR 761.208), retention of manifest records (40 CFR 761.209), manifest discrepancies (40 CFR 761.210), unmanifested waste reports (40 CFR 761.211), exception reporting (40 CFR 761.215), and certification of disposal (40 CFR 761.218). For closure cost estimating purposes, record keeping will be conducted by a third party, and not by General Electric.

Shipping of PCB waste inventory and decontamination wastes for disposal will be done by a hazardous materials shipper. The shipper will have an EPA identification number and will be required to comply with all applicable sections of 40 CFR 761 Subpart K. All drums and boxes used for waste disposal will comply with DOT regulations for shipment of hazardous materials. Bulk liquids will be pumped from the bulk storage tanks into tanker trailers and will be shipped in accordance with all applicable DOT and EPA regulations.

Wastes generated during facility decontamination will be stored within the subject storage facility until final disposal, excepting certain temporary storage allowance. At the time of closure, storage of the facility decontamination materials will be in compliance with applicable storage requirements.

5.13 Closure Cost Estimate

5.13.1 Certification

Under the civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 125 U.S.C. 2615), I certify that the information contained in or accompanying this closure plan is true, accurate, and complete to my best knowledge and belief based on current operational practices and available information. As to the identified section(s) of this closure plan for which I cannot personally verify truth and accuracy, I certify as the company representative having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete to their best knowledge and belief based on current operational practices.

Name	<u>Richard J. Wohaska, P.E.</u>
Title	<u>Principal-in-Charge</u>
Company	<u>ERM, Inc.</u>
Date	<u></u>

5.13.2 Cost Estimate For Closure

Portland PCB Facility
Portland, Oregon

This cost estimate has been prepared according to the following guidelines:

- the preparation conforms with the requirements as presented in 40 CFR 761.65 (f);
- the estimate reflects the scope of the Closure Plan for this facility. It should be noted that the Closure Plan has been prepared by others. The appropriateness of the Closure Plan work scope for site conditions was not verified during preparation of this cost estimate;
- maximum inventory of PCB wastes assumed to be on the premises requiring disposal at time of closure;
- assumes the need for a third party not related to General Electric to perform all closure activities;
- current market pricing without regard to discounts;
- no credit for salvage value of the structure, equipment, or waste inventory;
- as no treatment of PCB wastes occurs at this facility, no allowance for on-site treatment of the PCB waste inventory has been made;
- all direct (materials, labor, transport and disposal of PCB waste inventory, equipment, etc.) and indirect costs (engineering, supervision, administrative, contractor's fees, contingencies, etc.) have been included;
- an overall contingency of 15% has been applied to the closure cost estimates to account for fluctuations in pricing or unknown future impacts on the closure work scope;
- PCB liquids estimated to weigh 12.5 lb/gallon; wash water estimated to weigh 8.4 lb/gallon;
- the estimate is based on current (1992) dollars;
- demonstration of financial assurance is presented in Appendix CPD.

-Revised-
November 2001

Item #1 - Preparation of Health and Safety Plan

(Refer to Closure Plan Section 4.0, 5.12.5)

Prepare Health and Safety Plan (includes expense and administrative support)

16 hours @ \$120/hour =

\$ 1,920

Total Item #1

\$ 1,920

-Revised-
November 2001

Item #2 - Disposal of Maximum Inventory

(Refer to Closure Plan Section 5.14)

- a) Draining and flushing of 500 transformers; preparation of all PCB wastes including sampling and analysis sufficient for disposal, manifest preparation, documentation, handling and loading.

500 transformers @ \$150/transformer = \$ 75,000

Labor-Preparation of shipments: 25 @ \$200/shipment = \$ 5,000
(Number of shipments obtained from Item #2 (c))

- b) Incineration of transformer PCB liquids @ APTUS, Coffeyville, KN

20,000 gallons @ 12.5 lbs/gallon @ \$0.55/lb APTUS \$ 137,500

Trip # = 20,000 gallons x 12.5 lbs/gal. x 1 Trip/40000 lbs. = 7 Trips

Transportation:

7 trips x 1906 miles x \$4.40/mile = \$ 58,705

- c) Landfilling of Transformer Carcasses @ Enviro-safe, Boise, ID

1,000,000 lbs/2000 lb/ton @ \$380/ton (Enviro-safe) = Total Disposal Cost = \$ 190,000

Taxes/Fees: ID: \$30/ton

500 tons x \$30 tax/ton = \$ 15,000

Trip # = 500 tons disposed x 1 trip = 25 trips 20 ton
Transportation:

25 trips x 432 miles x \$4.40/mile = \$ 47,520

- d) Incineration of PCB transformer flushing agents
(assumes use of non-RCRA hazardous solvent for flushing,
such as #2 fuel oil)

20,000 gallons (from b) @ 7.1 lb/gallon #2 fuel oil (\$0.48/lb (APTUS)) = \$ 68,160

-Revised-
November 2001

Trip # = 20,000 gallons x $\frac{1 \text{ trip}}{4000 \text{ gallon}}$
= 5 trips

Transportation: 5 trips x 1906 miles x \$4.40/mile = \$ 41,932

e) Incineration of drummed PCB liquids @ APTUS;

220 drums @ \$447/drum (APTUS); = \$ 98,340

Trip # = 220 drums x 1 trip/80 drums = 3 trips

Transportation:

3 trips x 1906 miles x \$4.40/mile = \$ 25,159

f) Landfilling of 150 drums of PCB solids at Enviro-safe, Boise, ID

150 drums @ \$75/drum, Enviro-safe = Total Disposal Cost = \$ 11,250

Taxes/Fees: ID: \$30/ton

150 drums x 400 lb/drum x 1 ton/2000lb = 30 tons

30 tons x \$30 tax/ton = \$ 900

Trip # = 150 drums x 1 trip/80 drums = 2 trips

Transportation:

2 trip x 432 miles x \$4.40/mile = \$ 3,802

g) Incineration of drums and/or boxes of capacitors at APTUS;

100 drums of capacitors @ 500 lb/drum @ \$2/lb APTUS = \$ 100,000

Transportation:

100 drums @ 80 drums/trip = 2 trips

2 trips @ 1906 miles x \$4.40/mile = \$ 16,773

60 boxes of capacitors @ 1600 lbs/box @ \$2/lb APTUS = \$ 192,000

Trip # = 60 boxes @ 1600/lbs/boxes x 1 trip/40,000 lbs = 3 trip

-Revised-
November 2001

Transportation:

3 trips @ 1906 miles x \$4.40/mile = \$ 25,159

h) Incineration of bulk PCB liquids stored in tanks, freon still

15,200 gallons x 12.5 lbs/gallon x \$0.55/lb APTUS = \$ 104,500

1,600 gallons x 12.5 lbs/gallon x \$0.155/lb APTUS = \$ 11,000

Trip # = (15,200 + 1,600 gallons x 1 trip/4000 gal = 5 trips

Transportation:

5 trips x 1906 miles x \$4.40/mile = \$ 41,932

i) Landfilling of PCB solids at Enviro-safe, Boise, ID

43 boxes @ \$180/box at Enviro-safe = \$ 7,740

Taxes/Fees: ID: \$30/ton

43 boxes @ 1000 lbs/box x 1 ton/2000 lbs = 21.5 tons
21.5 tons x \$30/ton \$ 645

Trip # = 43 boxes @ 1000 lbs/box x 1 trip/40,000 lbs = 2 trips

Transportation:

2 trips x 432 miles x \$4.40/mile = \$ 3,802

j) Incineration of PCB Articles Containers

75 Containers @ 500 lbs each @ \$2/lb APTUS = \$ 75,000

Trip # = 75 drums x 1 trip/80 drums = 1 trip

Transportation:

1 Trip x 1906 miles x \$4.40/mile = \$ 8,386

-Revised-
November 2001

k) Incineration of PCB Articles

166 articles @ 200 gallon/article @ 12.5 lb/gal @ \$2/lb APTUS \$ 830,000

Trip # = 166 articles @ 200 gallon/article @ 12.5 lb/gallon @ 1 trip /40,000 lbs
= 11 trips

Transportation:

11 trips x 1906 miles x \$4.40/mile = \$ 92,250

l) Incineration of Loose Capacitors

40 capacitors @ 1000 lbs/capacitor @ \$2/lb APTUS = \$ 80,000

Trip # = 40 capacitors @ 1000 lbs/capacitor @ 1 trip/40,000 lbs = 1 trip

Transportation:

1 trip x 1906 miles x \$4.40/mile = \$ 8,386

Total Item #2 \$ 1,375,571

Item #3 - Decontamination (For Facilities with Tanks)

(Refer to Closure Plan Section 5.12.6)

- a) Decontamination, dismantling, and preparation for shipment for disposal 2 tanks and freon still with total storage capacity of 16,800 gallons.

Labor: Assumes 3-man crew (foreman, 2 workers) for 8-hour days
@ \$1650/day 3 days @ \$1650/day =

\$ 4,950

Materials: Includes disposable gloves, coveralls, rags, wipes, saw blades, wiping solvent @ \$1.50/gallon (#2 fuel oil) used at a rate of 10 gallons for every thousand gallons of tank capacity.

Saw blades	= \$	<u>100</u>
Wipes, rags	= \$	<u>25</u>
Solvent 168 gallon x \$1.50/gallon	= \$	<u>252</u>
Protective Gear	= \$	<u>250</u>

Subtotal

\$ 627

Cleanup Verification: Assume one surface sample per tank collected by independent entity (such as the project manager or designee)

Collection of samples (includes expenses)

Labor: \$1000/day for 1 day =

\$ 1,000

Analyses of samples for PCBs 2 tanks x 1 sample x \$150/sample =
tank

\$ 300

Shipment of samples; overnight delivery x \$30/shipment
(1 shipment may contain up to 30 samples in one sample cooler)

\$ 30

Disposal of decontaminated metal

Delivery to local scrap metal reclaimer =

\$ 500

Disposal of Decommissioning Wastes

2 drums of rags, wipes, solids @ \$75 drum, EnviroSAFE =

\$ 150

*-Revised-
November 2001*

Transportation of these wastes is included in the shipment of other
decontamination materials, Item #4.

Total Item #3

\$ 7.557

Item #4 - Facility Decontamination

(Refer to Closure Plan Section 5.12.6)

Labor: Assumes 6 person crew (1 foreman, 5 workers) for 8 hour day
@ \$2700/day (includes setup of decon area, expenses, decon of
facility and equipment; assumes 50% re-wash to meet standards
6 days @ \$2700/day =

\$ 16,200

Materials: Disposables include gloves, coveralls, protective gear,
plastic sheeting, tape, wastewater drums, wipes, rags, squeegees,
maps, buckets, soap, and saw blades.

Reusable equipment includes saws, vacuums, steam generator and sprayer,
floor cleaner, sump pump, and boots. All these items will be
decontaminated prior to further use. Reusable equipment is typically
rented.

Disposables - \$2,000
Reusable Equip - \$2,500

Subtotal

\$ 4,500

Disposal of Decontamination Wastes

14 drums of rags, wipes, solids @ EnviroSafe, Boise, ID
14 drums x 400 lbs/drum x 1 Ton/2000 lbs = 1 Ton

\$75/drum @ EnviroSafe x 14 drums =

\$ 1,050

Taxes/Fees: ID: \$30/ton

2.8 tons x \$30 tax/ton =

\$ 84

47 drums of contaminated washwater and fluid for incineration (\$0.48/lb
(APTUS)) assuming 8.4 lb/gallon for washwater =

\$ 10,423

Transportation: 10 drums of PCB solids to EnviroSafe, Boise, ID

Trip # = 10 drums x 1 trip

80 drums = 1 trip

1 trip @ 80 drums @ 432 miles @ \$4.40/mile =
trip

\$ 1,901

47 drums of PCB washwater to APTUS

*-Revised-
November 2001*

1 trip @ 80 drums @ 1906 miles @ \$4.40 mile =
trip

\$ 8,386

Total Item #4

\$ 42,544

-Revised-
November 2001

Item #5 - Sample Collection and Analysis

(Refer to Closure Plan Section 5.0)

Labor - includes collection of surface, soil, groundwater, truck ramps, loading docks, access roads, ditch/runoff routes, layout of interior and exterior sampling grid, pre-sampling survey judgmental and systematic sample collection, data evaluation, and report preparation; expenses and administrative support. Assumes 3 person crew for 8 hour day @ \$3000/day 15 days of sampling and follow-up @ \$3000 =

Subtotal \$ 45,000

Materials: Disposables including safety gear, gloves, wipes, etc.
Reusables including sampling tools, trowels, augers, bowls, etc.
All reusables will be decontaminated between uses.

Disposables - \$2000
Reusables - \$4000

Subtotal \$ 6,000

Analytical (Assumes premium turnaround to maintain closure schedule compliance.)

Breakdown of Samples

<u>Type</u>	<u>Number (estimated)</u>
Interior Surfaces	250
Exterior Surfaces	150
Transportation Facilities	25
Drainage Ditches/Surface Runoff	20
Boring Samples	6
Groundwater	8
 Subtotal	 459
# cleanup verification samples $459 \times 0.50 =$	230
Total sample number	689

Analytical cost 689 samples x \$150/analyses = \$ 103,350

Shipping costs (overnight) =

*-Revised-
November 2001*

689 samples x 1 shipment/30 samples x \$30/shipment =

\$ 689

Total Item #5

\$ 155,039

-Revised-
November 2001

Item #6 - Disposal of Contaminated Soil and/or Debris

It is assumed that 500 tons of PCB contaminated soil and/or debris will require disposal

Labor - includes excavation, preparation of shipment, safety monitoring, expenses, administrative support. Assumes a 5 person crew (1 foreman, 3 workers, 1 safety monitor) for an 8 hour day @ \$3500/day 35 days

\$ 122,500

Materials - includes plastic sheeting, decon materials, equipment rentals, disposable items.

Disposable equipment

\$ 2,500

Reusable equipment (includes rental)

\$ 4,500

Subtotal

\$ 7,000

Disposal - 500 tons @ EnviroSAFE, Boise, ID

500 tons @ \$375/ton =

\$ 187,500

Trips = 500 tons x 1 trip/20 tons = 25 trips

Idaho Disposal Fee: 500 tons @ \$30/ton

\$ 15,000

Transportation:

25 trips @ 432 miles @ \$4.40/mile =

\$ 47,520

Total Item #6 =

\$ 379,250

-Revised-
November 2001

Item #7 - Soil Boring/Monitoring Well Installation

Installation of 6 soil borings to 30 foot depths

Labor: Assumes a 4 person crew for an 8 hour day at \$2500/day.
Cost includes drilling sampling, safety monitoring, evaluation,
and report.

5 days @ \$2500/day = \$ 12,500

Materials: Safety equipment & disposables \$ 1,500

Installation of 8 ground water monitoring wells including development,
sampling, evaluation, and report.

Labor: Assumes a 4 person crew for an 8 hour day at \$3000/day.
Cost includes drilling.

16 days @ \$3000/day = \$ 48,000

Materials: Safety equipment, well construction materials
(grout, pipe, screen, sand, etc.)

Disposables - \$3500 \$ 3,500

Total Item #7 = \$ 65,500

*-Revised-
November 2001*

Item #8 - Engineering, Project Management, Reporting & Certification

Labor: includes all expenses and administrative support. Assume labor rate of \$2000/day.

40 days @ \$2000/day = \$80,000

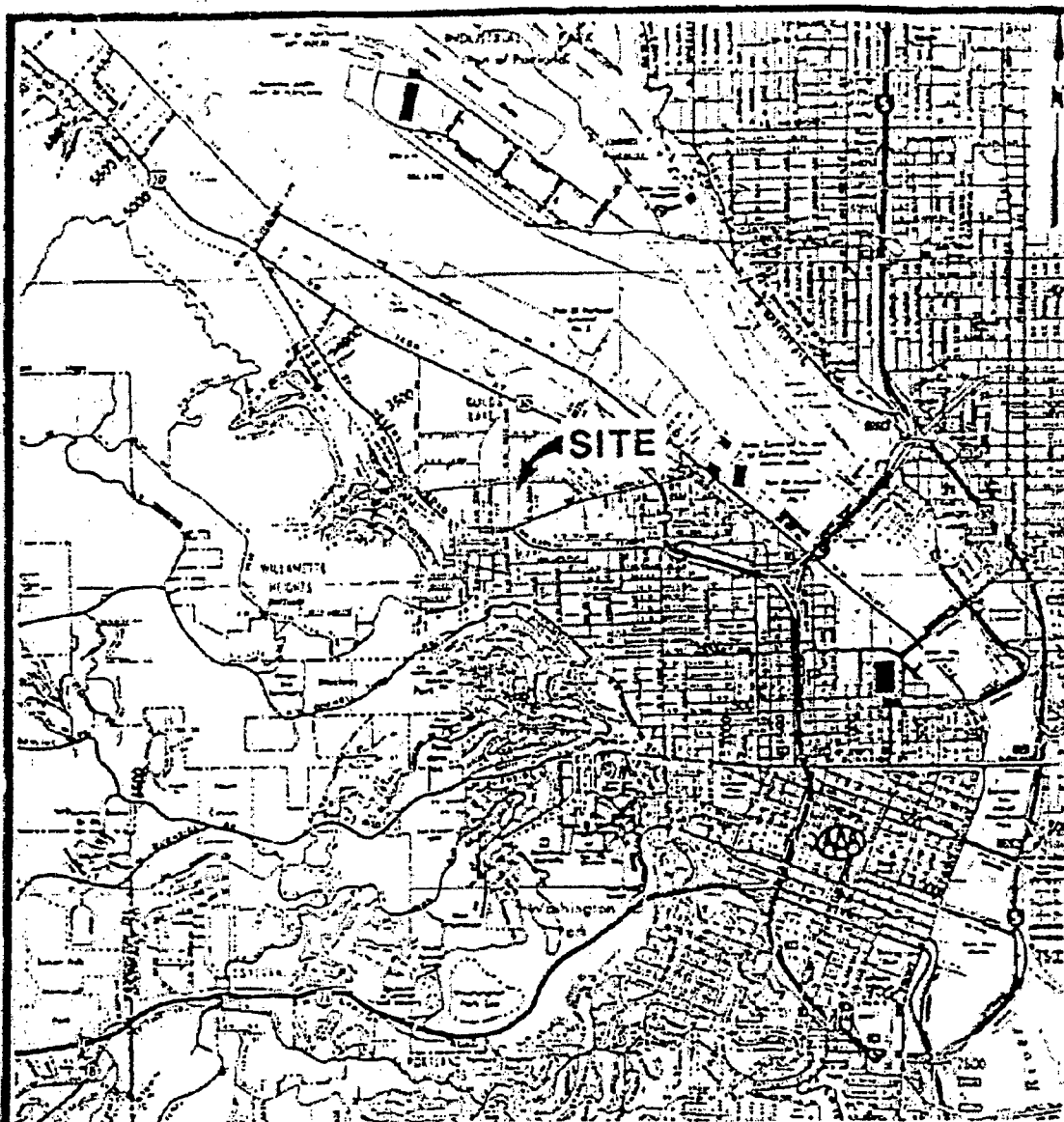
Total Item #8 =

\$ 80,000

-Revised-
November 2001

COST ESTIMATE SUMMARY

<u>Item #</u>	<u>Topic</u>	<u>Cost</u>
1	Health and Safety Plan Preparation	\$ <u>1,920</u>
2	Disposal of Maximum Inventory	\$ <u>2,375,571</u>
3	Decommissioning PCB Tankage	\$ <u>7,557</u>
4	Facility Decontamination	\$ <u>42,544</u>
5	Sample Collection and Analysis	\$ <u>155,039</u>
6	Disposal of Contaminated Soil, Debris	\$ <u>379,250</u>
7	Soil Boring/Monitoring Well Installation	\$ <u>65,500</u>
8.	Engineering, Project Management, Reporting & Certification	\$ <u>80,000</u>
<i>Subtotal</i>		\$ <u>3,107,381</u>
15% Contingency x 0.15		\$ <u>466,107</u>
Total Estimated Cost		\$ <u>3,573,488</u>



SOURCE: CALIFORNIA STATE AUTOMOBILE ASSOCIATION,
PORTLAND (APRIL, 1989).

0 0.5 1
APPROXIMATE
SCALE IN MILES

GENERAL ELECTRIC
PORTLAND, OREGON



LAW ENVIRONMENTAL
INC.

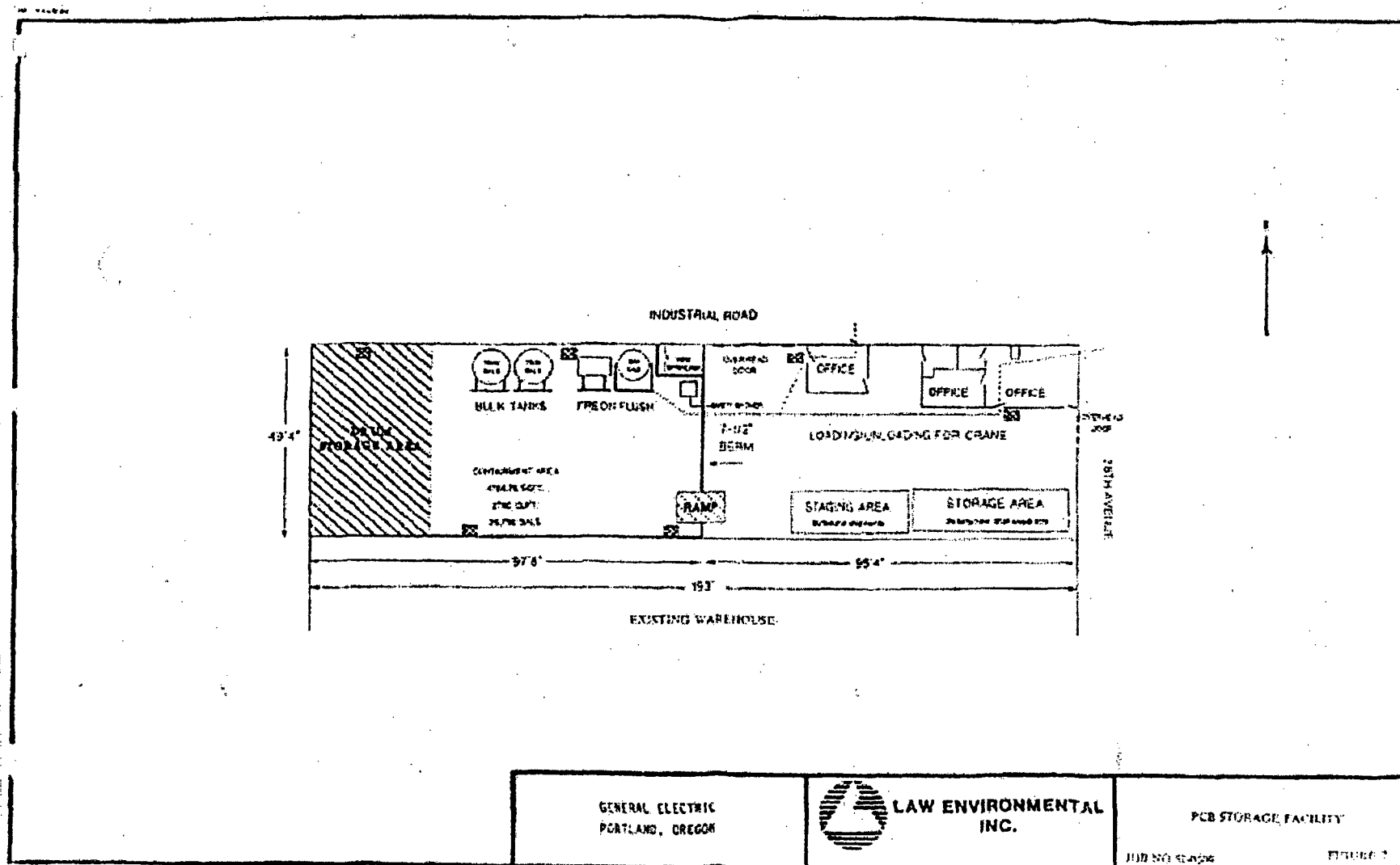
SITE LOCATION MAP

JOB NO. 52-0509

FIGURE 1

SCHN00317047

SCHN00317048





SOURCE: U.S.C.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP,
PORTLAND, OREG.-WASH., 1961 (PHOTOREVISED 1970 AND 1977).

0 2000
SCALE IN FEET

GENERAL ELECTRIC
PORTLAND, OREGON



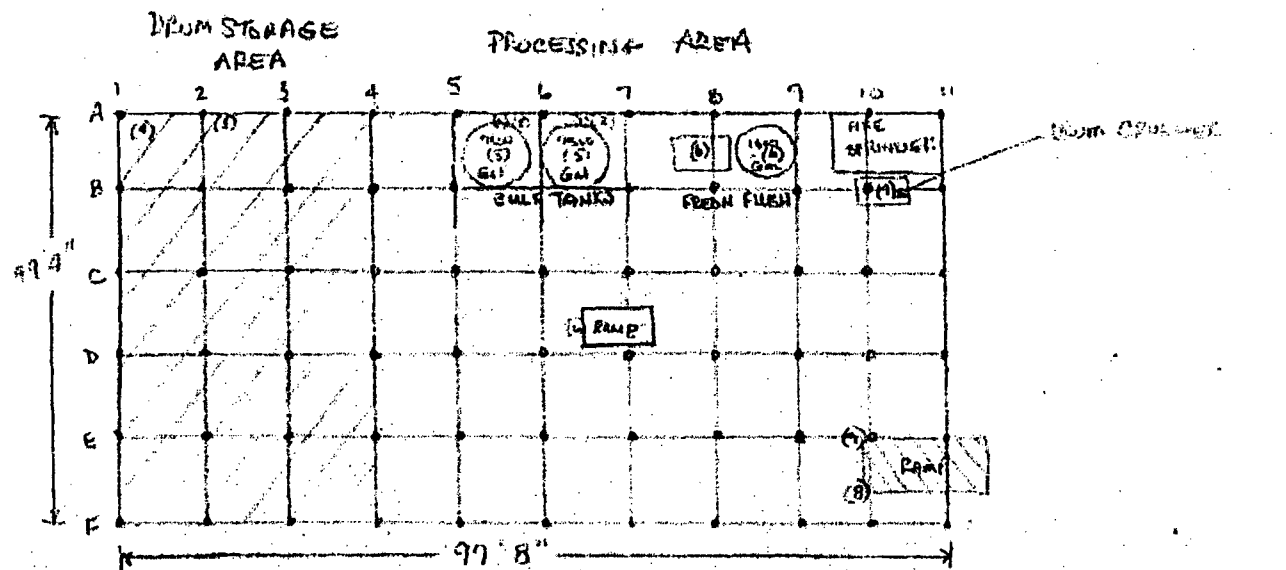
LAW ENVIRONMENTAL
INC.

SITE LOCATION MAP
(TOPOGRAPHIC)

JOB NO. 52-0509

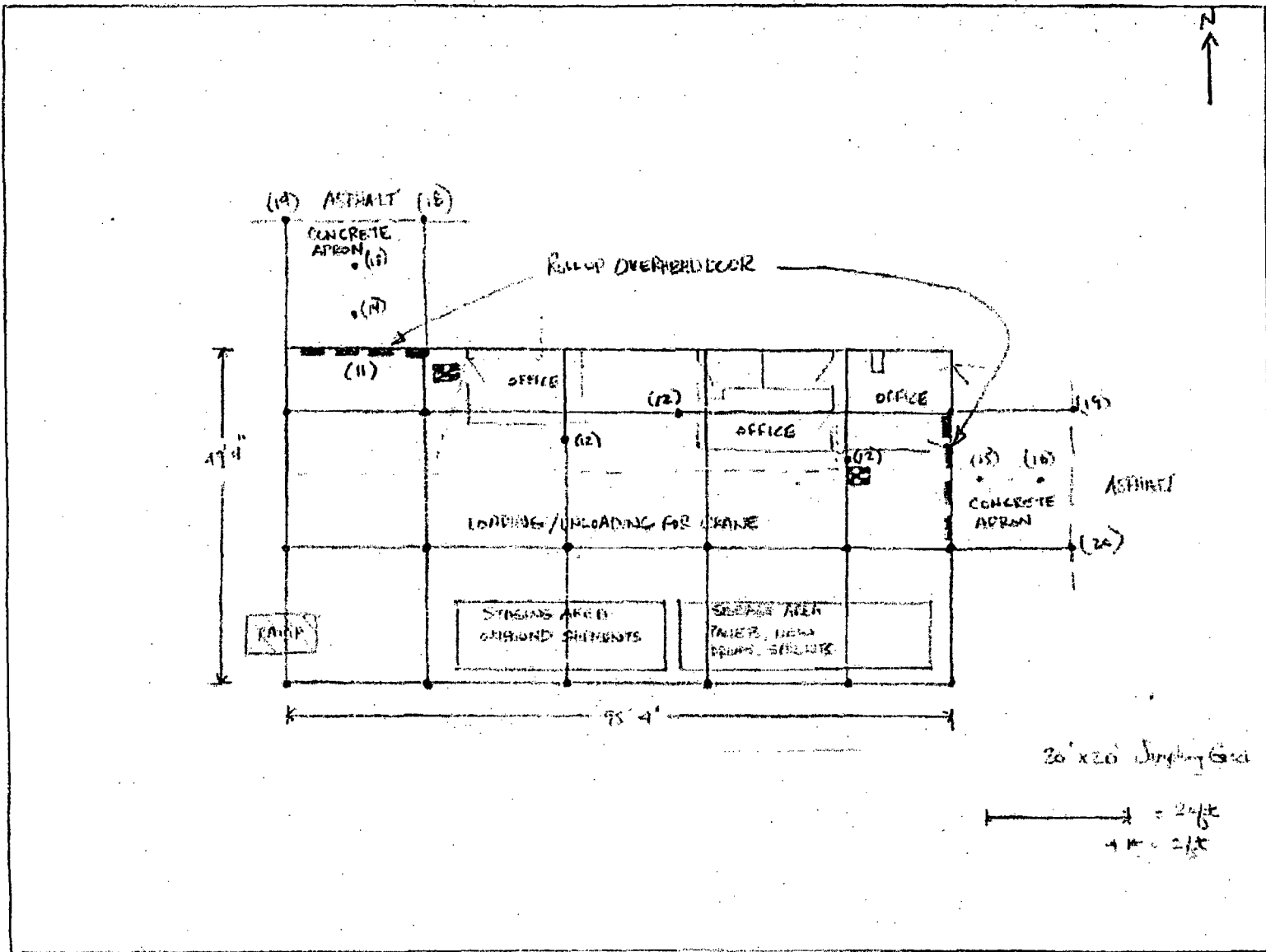
FIGURE 3

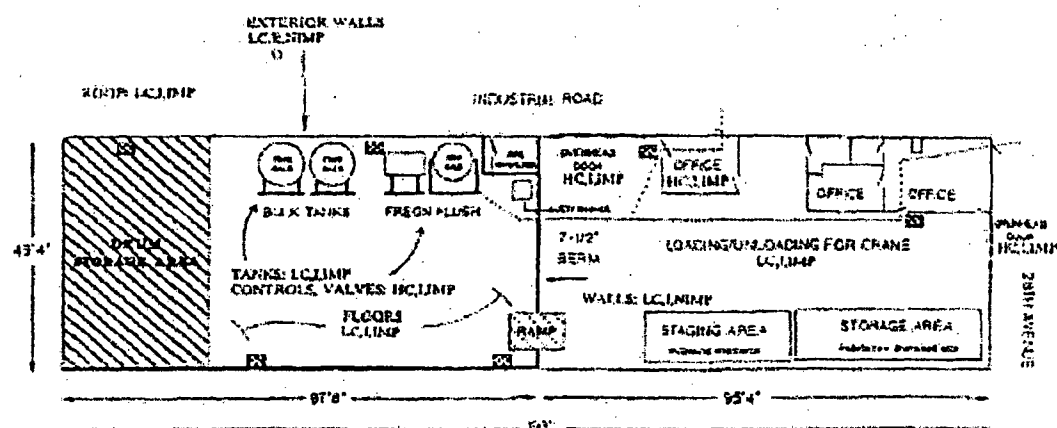
SCHN00317049



10 x 10 Sampled

$\frac{1}{2} \times 20 = 10$
 $\frac{1}{2} \times 20 = 10$



**LEGEND**

- HC - HIGH CONTACT
- LC - LOW CONTACT
- O - OUTDOOR
- I - INDOOR
- IMP - IMPERVIOUS
- NIMP - NON-IMPERVIOUS
- SOIL - SOIL

GENERAL ELECTRIC
PORTLAND, OR



LAW ENVIRONMENTAL
INC.

SURFACE CLASSIFICATIONS:
DECONTAMINATION CRITERIA

JOB NO 55-0209

FIGURE 4

APPENDIX CPA

**SPILL PREVENTION AND
COUNTERMEASURE PLAN**

SCHN00317053



SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
SPCC

Page 1 of 14

APPARATUS & ENGINEERING
SERVICE OPERATIONS
GENERAL ELECTRIC COMPANY
2535 NW 28TH
PORTLAND, OREGON 97210
1990

Prepared By: S. K. Porter
S. K. PORTER
Facility Supervisor
Portland Decommissioning Facility

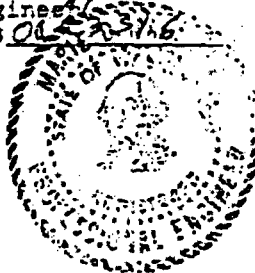
Date: 6-28-90

Reviewed By: J. E. Hachman
J. E. HACHMAN
Operations Manager
Portland Oregon

Date: 6/28/90

Approved By: M. Mahaffey
M. MAHAFFEY
Professional Engineer
~~Civil~~ License # 065376
WASHINGTON

Date: 6/29/90



SPCC/1990
SKP/jr

SCHN00317054

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
SPCC

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SCHN00317055

I. SPILL DEFINITION

A "SPILL" is defined as the release of liquids.

The spill of any material is to be brought to the attention of the Facility Supervisor (or alternate) immediately.

Spills, involving 1 quart of PCB material inside the spill Containment area or spill of any amount of PCB outside the Containment area. MUST BE REPORTED immediately to the GE PCB Hot-Line

1-800-635-8918, Ext. 66

The caller will be directed on how to proceed.

Action is to begin immediately to contain any spill or leak upon first becoming aware of it, and before stopping to report the spill. After containing and reporting the spill to Facility Supervisor (or alternate) and calling the GE Hot line number above, clean-up action should start as soon as possible thereafter.

NOTE: Section

VII. SPILL CLEANUP REQUIREMENTS

SPCC

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II. SPILL NOTIFICATION PROCEDURES INTERNAL

ANY SPILL on the FACILITY premises will be reported immediately to :

FACILITY SUPERVISOR: Shirlee R. Porter

GE Telephone No. (503) 221-5098
Home Telephone (503) 649-6772

or:

1st Alternate: Steve Phelps

GE Telephone No. (503) 221-5100
Home Telephone No. (206) 687-0296

or:

2nd Alternate: Gary E. Schmalz

GE Telephone No. (503) 221-5097
Home Telephone (503) 666-7605

Spill Information
Required:

- * Time of spill/time observed
- * Location
- * Building sewer or other drain involved
- * Water bodies or storm sewers involved
- * Probable Source
- * Volume and duration
- * Material released

SCHN00317057

III. SPILL NOTIFICATION PROCEDURES EXTERNAL

ANY SPILL will be reported immediately to:

FACILITY SUPERVISOR:	Shirlee R. Porter
GE Telephone No.	(503) 221-5098
Home Telephone	(503) 649-6772

or:

1st Alternate:	Steve Phelps
GE Telephone No.	(503) 221-5100
Home Telephone Nab.	(206) 687-0296

Or:

2nd Alternate:	Gary E. Schmalz
GE Telephone No.	(503) 221-5097
Home Telephone	(503) 666-7605

In the event of a spill containing 10 pounds or more of PCB, the amount of the PCBs in the spill having been confirmed by the GE Risk Control Operation, it is the responsibility of the Shop Manager or his alternate to immediately notify by telephone:

1. ENVIRONMENTAL PROTECTION AGENCY
Seattle, WA
24 Hour Phone Number (206) 442-1263

2. U.S. COAST GUARD DISTRICT
Commander, 13th Coast Guard District
915 S.W. 2nd Avenue
Seattle, WA 98174
(206) 442-5886

The following information should be reported to these agencies:

1. Name, address and telephone number of person reporting
2. Exact location of spill
3. Material spilled
4. Volume and duration of spill.
5. Time observed
6. Action taken for containment and cleanup
7. Person to contact on scene

IV. SPILL RESPONSE ACTION

IN THE EVENT A PCB SPILL OF ANY KIND OCCURS

1. Steps will be taken immediately to contain the spill and begin immediate clean up.
2. Notification procedures as outlined for INTERNAL & EXTERNAL notification within this SPCC will be performed.
3. Absorbent material shall be spread over the spilled material in sufficient quantity to completely absorb the liquid.
4. The contaminated absorbent shall be collected, placed in a 17C drum and disposed of in the proper manner.
5. The proper authorities and governmental agencies will be alerted as deemed appropriate by G.E. Facility Supervisor, or alternate Authority.
6. Any PCB spill shall be cleaned up in accordance with the requirements in subpart "G" of 40CFR 761.

IN THE EVENT OF SPILL INTO PUBLIC WATERWAYS

1. In the event of an oil or PCB spill that reaches drinking water, sewer systems or surface water, further directions must be obtained from EPA Region X, at (206) 442-1263
2. Notification procedures as outlined for INTERNAL & EXTERNAL notification within this SPCC will be performed.
3. An examination of the affected waterway shall be made by shop personnel to determine available options for limiting the spread of material. If the spill is into the sewer system, the operator of that system shall be notified: EPA Region X, (206) 442-1263, must be notified and consulted prior to proceeding with any clean-up procedure.

3. If EPA REGION X, requires cleanup action beyond the capabilities of present personnel, the services of a reputable contractor should be engaged.

Approved Contractors include:

RIEDEL INTERNATIONAL
Environmental Services
Foot if N. Portsmouth
Portland, OR 97217

V. OTHER SPILLS

1. A spill is considered "Other Spills" if shop personnel can contain and control the material as described below, and providing no oil or PCBs have reached drinking water, sewers, surface water or other waterways.

2. Sufficient quantities of absorbent material shall be kept on hand in the facility to absorb material from small spills. When a spill occurs, steps shall be taken to prevent spillage from spreading or from entering a sewer or storm drain. Absorbent material shall be spread over the spilled oil or PCB in sufficient quantity to completely absorb the spilled material. If the spill is too large to completely absorb, the absorbent material will first be used to form a dike to contain the spill.

3. Absorbent shall be collected and disposed of in the proper manner prescribed by regulations. At no time should any liquid spill material be washed into or allowed to enter a drain.

4. All spills should be cleaned up as detailed in Section

VII. SPILL CLEAN UP REQUIREMENTS.

SPCC
Page 8 of 14

VI. CONTACTS - SPILL RESPONSE ACTION

Further Response notification information as follows:

GE Company
Pacific Service Region headquarters

a) R.J. Perfetti Office: (404) 447-7763
Manager, PCB Services Home: (404) 442-5997

b) R.D. Peters Office: (303) 753-2268
PCB Risk Control Home: (303) 985-5707

GE Company
Legal Council

a) W.P. Thornton Office: (518) 385-3720
Attorney Home: (518) 387 -5455

b) E.P. Castorina Office: (518) 385-1409
Attorney Home: (518) 399-2404

U.S. Coast Guard (800) 424-8802

Environmental Protection Agency - (206) 442-1263

GE Company
Apparatus Service Shop - PCB Decom Facility, Portland

a) John Haehman Office: (503) 221-5100
Shop Manager Home: (206) 256-9224

b) Shirlee Porter Office: (503) 221-5098
Facility Supervisor Home: (503) 649-8052

EMERGENCY SPILL RESPONSE 24 HOUR HOTLLNE
(800) 685-8918 ext 66

SCHN00317061

VII. SPILL CLEAN-UP REQUIREMENTS

A. Low concentration spills involving less than 1 pound of PCBs (less than 270 gallons of less than 500 PPM PCB or untested mineral oil)

1. Solid Surfaces - double wash/rinse.
2. Soil - Remove spill area plus one lateral foot, backfill with clean soil.
3. Complete within 48 hours.

B. High conc entrantion spills and low concentration spills involving 1 pound or more PCBs by weight (270 gallons or more of less than 500PPM PCB or untested mineral oil)

1. Cordon off the spill area plus aft. buffer, use warning signs.
2. Record and document spill area, including photos if possible.
3. Initiate soil and surface area cleanup.
4. If spill area unclear, establish boundaries by sampling.
5. No time limit, but complete promptly to demonstrate policy adherence.
6. Solid surfaces to be cleaned to 10 ug/100 sq.cm. Except when #7. below applies.
7. Low contact, indoor, non impervious solid surfaces: Option: 100 ug/100sq.cm. and encapsulate, subject to EPA Regional veto.
8. Low contact, outdoor surfaces cleaned to 100 ug/sq.cm.
9. Soil cleanup to 25ppm PCBs by weight.
10. Postcleanup sampling per 40 CFR 761.130, Reference PCB Certification Manual Tab 8, Information Letter DGF-5.

VIII. SPILL RECORDS

At the completion of a spill cleanup, the activities throughout will be documented and the records, along with any required certification, will be maintained for a period of five years. The following information will be included in the records:

1. Identification of source of spill (type equipment)
2. Estimated or actual date and time of spill occurrence.
3. Date and time cleanup completed, nature/duration of delays.
4. Description of spill location and nature of contamination.
5. Precleanup sampling data establishing spill boundaries and description of sampling method.
6. Description of solid surfaces cleaned.
7. Depth and amount of soil excavation, amount removed
8. Postcleanup verification sampling data, sampling methodology and analytical technique used.

IX. HISTORY OF SPILL INCIDENTS

GENERAL ELECTRIC COMPANY first began operation at this facility on January 7, 1984.

In August 1988, a spill occurred within the Facility Containment Area. This was reported and cleaned up as per EPA requirements.

No Spills entering a waterway of storm sewer system have ever occurred at this facility.

X. POTENTIAL SPILLS PREVENTION AND CONTROL

DRUM STORAGE

<u>Number of Drums</u>	<u>Material</u>	<u>Location</u>
Storage capacity of drums	Polychlorinated Biphenyls	All
the diked area using stored	Insulating Liquid and	are
25% rule in excess of the	PCB contaminated mineral	within
400 drums. The maximum number of drums to be of	oil, kerosene and other "diked" solvents.	area
stored at any one time is 200 drums.	Facility	the

BULK STORAGE

<u>Bulk Capacity</u>	<u>Material</u>	<u>Location</u>
Two Bulk tanks with are	Polychlorinated Biphenyls	Tanks
a storage capacity housed	Insulating Liquid and	are
of 7500 gallons each. the	PCB contaminated mineral	within
Each tank equipped with capacity alarms to ensure overflow prevention.	oil, kerosene and other solvents.	"diked" area of the Facility

See Attached drawing of Facility Containment areas

All processing to be performed within the confines of containment areas.

The concrete flooring within the containment area, and the curbing has been coated with epoxy material approximately 1/8" in depth. Epoxy to

prevent any spilled material from seeping through any possible cracks in the concrete flooring.

SPCC
Page 13 of 14

XI. PERSONNEL TRAINING

Facility personnel have been provided with a copy of this, and informed of, the provisions of this SPCC Plan.

All PCB handlers are required to attend and pass G.E.s "PCB Certification" course and the yearly "Re-Certification" program.

All PCB handlers are further trained in TSCA regulations, Commercial Drivers License program, and regularly scheduled safety meetings.

Instruction in and use of Facility "Standard Operating Procedures". S.O.P. guidelines detail safety and compliance procedures set forth by G. E.. (See Attached S. O. P.)

All handling of PCBs is performed under the supervision of PCB Certified processor.

XII . SECURITY

Steel gates enclose the receiving bays to restrict any foot traffic. These gates remain closed at any time receiving bays are not in use.

A "Centrally Monitored" security system is in use at all times when Facility is not manned or under operation.

SCHN00317066

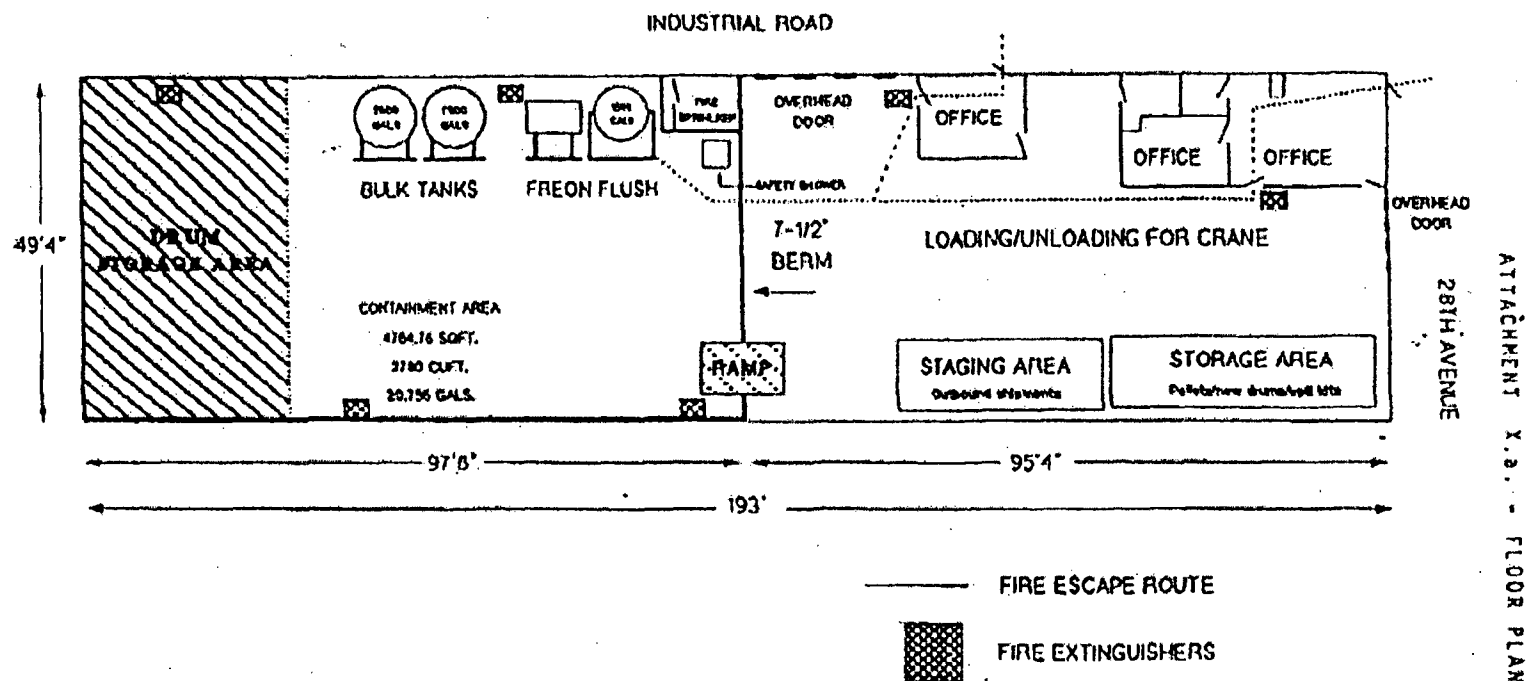
XI I I . INSPECTION AND RECORDS

Inspection of PCB Facility is completed on a weekly basis using the attached inspection form.

Inspection responsibility is assigned on a rotating schedule of current PCB facility processing employees. Rotation ensures comprehensive observation by each individual and maintains full awareness.

Completed inspection forms are sent to G.E. Risk Control Manager, in Denver, CO. as well as file copies maintained within Facility.

GENERAL ELECTRIC COMPANY PCB DECOMMISSIONING FACILITY PORTLAND, OREGON



SCHN00317068

APPENDIX CPB
HEALTH AND SAFETY PLAN

SCHN00317069

PROJECT HEALTH AND SAFETY PLAN (DRAFT)

This form in conjunction with ERM's Health and Safety Guidance Manual is intended to provide health and safety guidelines for project field activities. The activities described herein should be conducted using good work practices and judgments consistent with OSHA and training.

The Project Manager or designated Site Safety Officer must ensure that all project personnel review and sign this form, and document these activities in project file.

For all items on this form, attach additional pages as necessary.

ADMINISTRATIVE INFORMATION	<i>Site Name and Location</i> Portland PCB Service Center, Portland, OR		
	<i>Client</i> General Electric		
	<i>Project Name</i> Reduced Storage PCB Storage Area Closure		
	<i>Project Manager</i>	<i>Project #</i>	<i>Date</i>
<i>Project Health and Safety Officer</i>		<i>Site Health & Safety Officer(s)</i>	<i>Scheduled Date/Period of Field Tasks</i>
SITE/PROJECT GENERAL INFORMATION	<i>Field Project Scope:</i> This project involves the decontamination, verification sampling, and closure of the PCB storage area. The PCB storage area consists of a 50 ft x 193 ft area.		
	Prior to decontamination activities, the reduced storage area will be vacated and all existing inventory will be shipped to an approved storage and disposal facility. The floors, walls, and curbing will be vacuumed to collect dust and particulate matter. The interior surfaces (floor, walls, curb) of the storage area will be washed and rinsed using a steam cleaner and/or brushes with water and a biodegradable solvent such as SafeSolv 378 Degreaser/Machinery Cleaner. A second wash will be followed by a double rinse. Any areas that fail the white cloth test will be cleaned again as described above.		
	Systematic verification chip samples will be taken of the interior floor and walls. Authoritative wipe samples will be taken from the inventory items and reusable decontamination equipment. Samples will be analyzed for PCBs using EPA SW-846 Method 8080. Sampling and field documentation protocol will be followed as described in section 7.0 and 8.0 of the Closure Plan. Decontamination activities will be deemed complete upon receipt of analytical results that meet the applicable cleanup standards listed in the Closure Plan.		
	All liquid and solid PCB contaminated wastes will be shipped in accordance with Department of Transportation to an approved treatment, storage, and disposal facility.		
<i>Hazard Assessment Summary (Physical and Chemical)</i> <i>Physical:</i> Road/traffic hazards, heavy lifting (i.e. full ice chests), and slip, trip and fall hazards. <i>Chemical:</i> Potential exposure to PCB liquid aerosols and decontamination rinse water containing Aroclor 1260.			

CHEMICALS OF CONCERN	Chemical Name	PEL/TLV	Highest Reported Concentration (ppm)			Site Location/Source
			Air	Water	Solids	
	PCBs (Aroclor 1260 or 60% chlorine)	0.5 mg/m ³ or 0.05 ppm	NA	NA	NA	It is anticipated that the PCB contamination may be present as an aerosol and within the decontamination rinse water. Previous wipe sample results collected from an adjacent area range from 2-7 ug/100 sq. cm. Aroclor 1260 is a suspect human carcinogen. Due to no previous data do not exist Aroclor 1260 will be used to establish occupation exposure limits.
	Freon and other chlorinated solvents - need to determine					

Other Potential Hazards or Concerns

Radioactive Materials ☐
 Pathogens ☐
 Cold ☐

Oxygen Deficiency ☐
 Poisonous Animals ☐
 Heat ☐

Underground Utilities ☐
 Aboveground Utilities ☐
 Other ☐

Notes:

AIR MONITORING ACTION LEVELS	Monitoring Concern	Action Level (ppm)	Level of Protection	Monitoring Instrument
	None			

Criteria

A. Monitoring Procedures	B. Contingency Procedures	C. Special Procedures and Precautions
Direct reading instruments are not available for the detection of airborne PCBs.		An emergency spill kit shall be present. Employees handling drums containing PCB contaminated waste should be aware of the raised perimeter at the west exterior entrance.

PROTECTION LEVEL	The protection level determined for Red Zone task(s) is: LEVEL C A <input type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/>							
PERSONAL PROTECTIVE EQUIPMENT REQ = REQUIRED REC = RECOMMENDED NA = NOT APPLICABLE	Equipment	Req	Rec	NA	Equipment	Req	Rec	NA
	Boots (steel toe)	✓			Hard Hat			✓
	Boots (outer boot covers)	✓			Safety Glasses w/side shields	✓		
	LS Shirt & Pants	✓			SCBA (Level B)			✓
	Ear Protection (during decontamination washing)		✓		Tyvek suit or coveralls(regular)			✓
	Fully Encapsulated Chemical Resistant Suit (Level A)			✓	Saranex (chem. resistant)	✓		
	Full Face Supplied Air (Level B)			✓	Full Face Negative Pressure Respirator <i>Only for Level C (see criteria above)</i>	✓		
	Gloves Sampling (neoprene)	✓			Splash Face Shield			✓
	Gloves Protective Outer (Neoprene/or Butyl Rubber)	✓			Other:			✓
WORK ZONE REQUIREMENTS	<p>Exclusion (Red) Zone: Reduced PCB Storage Area will be marked with hazard tape. Personnel must wear level C protection, which includes a combination respirator with a P100 particulate filter and an organic vapor cartridge. This level of respiratory protection has been determined based on visual inspections of the potential contamination within the reduced storage area, and the viscous nature of PCBs. Exhaust ventilation will also be used within this space because under ideal conditions, even a small amount of PCB solvent, such as 1 ml, requires a minimum of 16 air changes per hour to prevent airborne concentrations from exceeding the OSHA PEL. Therefore, exhaust ventilation and PPE will be used to prevent occupational exposures above the established regulatory limits.</p> <p>Contamination Reduction Zone: This zone is located immediately adjacent to the red zone. Personnel must wear level D protection, which includes the PPE listed above other than the full-face negative pressure respirator.</p> <p>Support Zone: This zone includes all other areas outside of the exclusion zone and the contamination reduction zone.</p>							
SITE ACCESS/CONTROL	Access to the reduced PCB storage area will be limited to authorized personnel (field decommissioning and sampling staff and GE representatives).							

DECONTAMINATION PROCEDURES	<p><i>Interior Surface Decontamination:</i> The floors, walls, and curbing will be vacuumed to collect dust and particulate matter. The interior surfaces (floor, walls, curb) of the storage area will be washed and rinsed using a steam cleaner and/or brushes with water and a biodegradable solvent such as SafeSolv 378 Degreaser/Machinery Cleaner. A second wash will be followed by a double rinse. Any areas that fail the white cloth test will be cleaned again as described above.</p> <p><i>Equipment Decontamination:</i> Inventory items and reusable decontamination equipment will be soaked and then washed by hand using alconox or equivalent detergent on the decon pad. To avoid an increase in the personal protective equipment listed in this plan, these items may not be steam cleaned.</p> <p>Contaminated PPE shall be disposed in accordance with section 6.0....check.....of the Closure Plan.</p>		
MEDICAL INFORMATION			
EMERGENCY CONTACTS (TO BE COMPLETED PRIOR TO DECOMMISSIONING ACTIVITIES)	Medical Emergency		
	<i>Name/Address of Nearest HOSPITAL:</i>		
	<i>HOSPITAL Telephone Number:</i>		
<i>Route to HOSPITAL (Route Map attached)</i>			
All Other Emergency Contacts			
Agency	Contact	City/Location	Telephone Number
Fire Department			
Ambulance			
Haz-Mat response			
Consulting Physician(s)			
Contract Decommissioning Project Manager			
GE Project Manager			
<i>Location of Nearest Telephone (mark on map, if appropriate):</i>			

ACKNOWLEDGMENT		I have read this Health & Safety Plan and understand its content.	
<i>Printed Name</i>	<i>Signature</i>	<i>Title</i>	<i>Date</i>

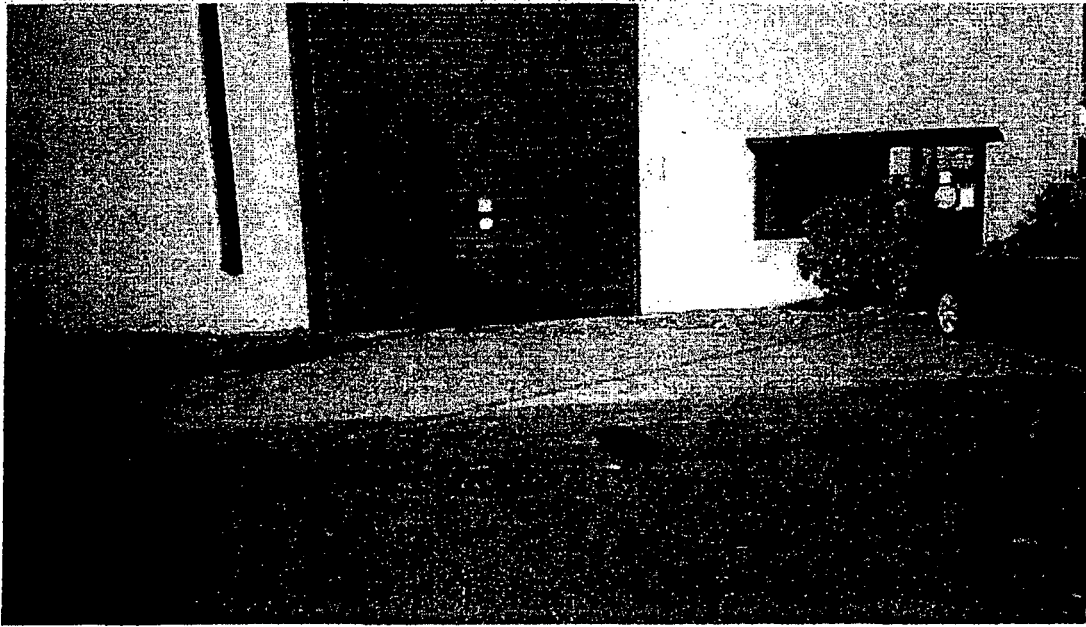
HEALTH & SAFETY PLAN EVALUATION		To evaluate the effectiveness of this health and safety plan and make future plans responsive to unexpected situations, the Project Manager or the Site Safety Officer must complete the following and file this entire document with the Health and Safety Coordinator.	
Actual Date/Period of Field Task(s)	Was the Safety Plan followed as presented? <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Was the Safety Plan Adequate? <input type="checkbox"/>
Yes <input type="checkbox"/> No <input type="checkbox"/>			
Describe, in detail, any changes to the Safety Plan while on-site			
Reason for Changes			
What changes would you recommend?			
SIGNATURES		Office Health and Safety Coordinator	Date

ERM

Project#: 4489Y.00.01

	Project Manager	Date
	Site and Safety Officer	Date

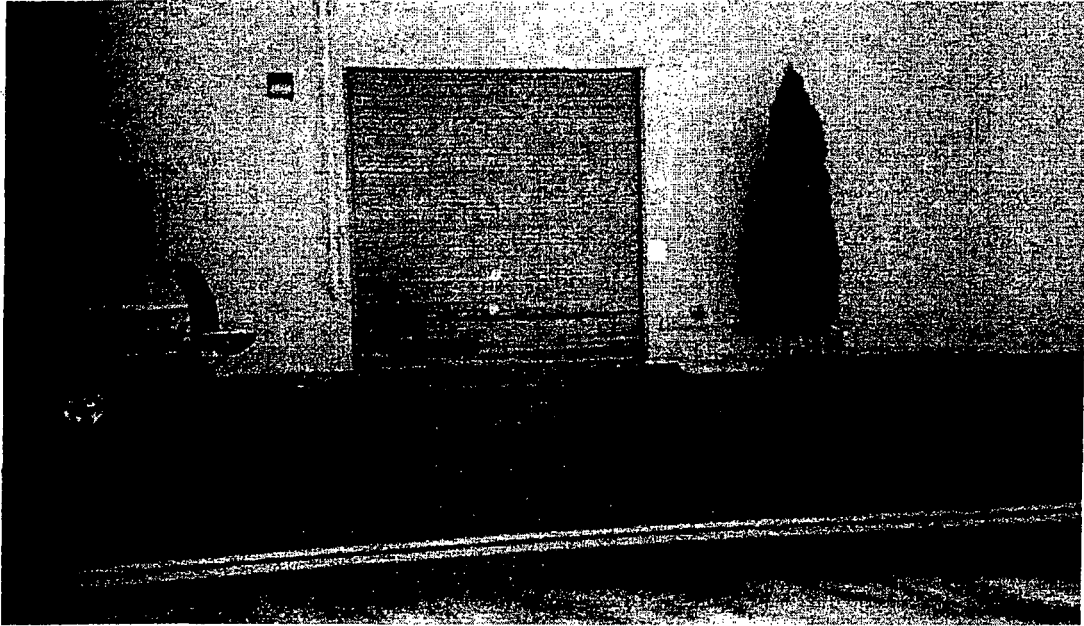
APPENDIX CPD
Photographs from Visual Inspection



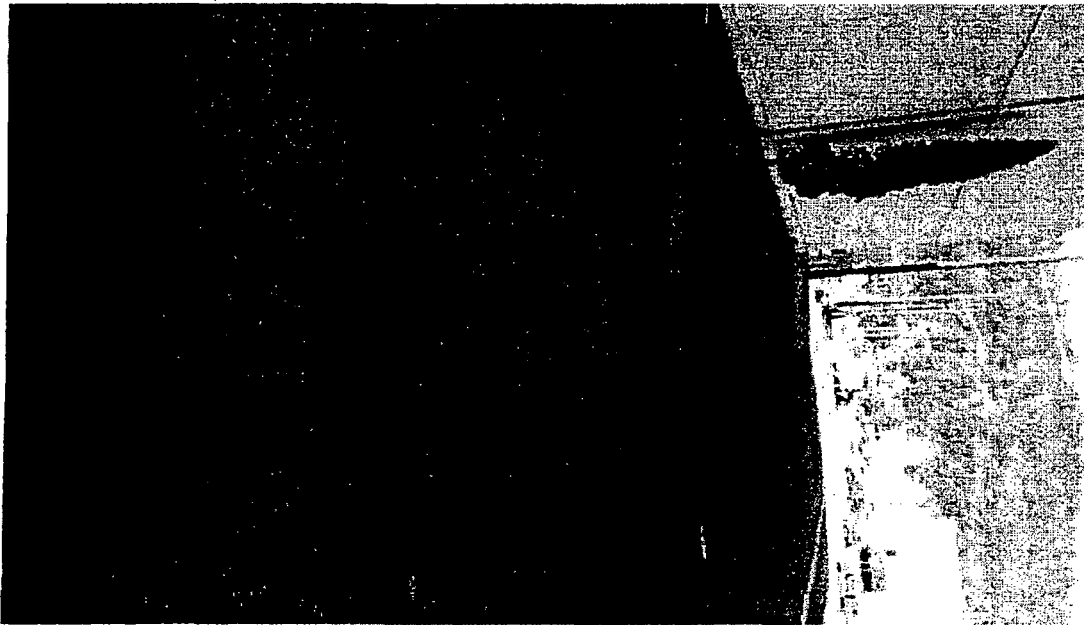
1. East entry door to loading/unloading area.



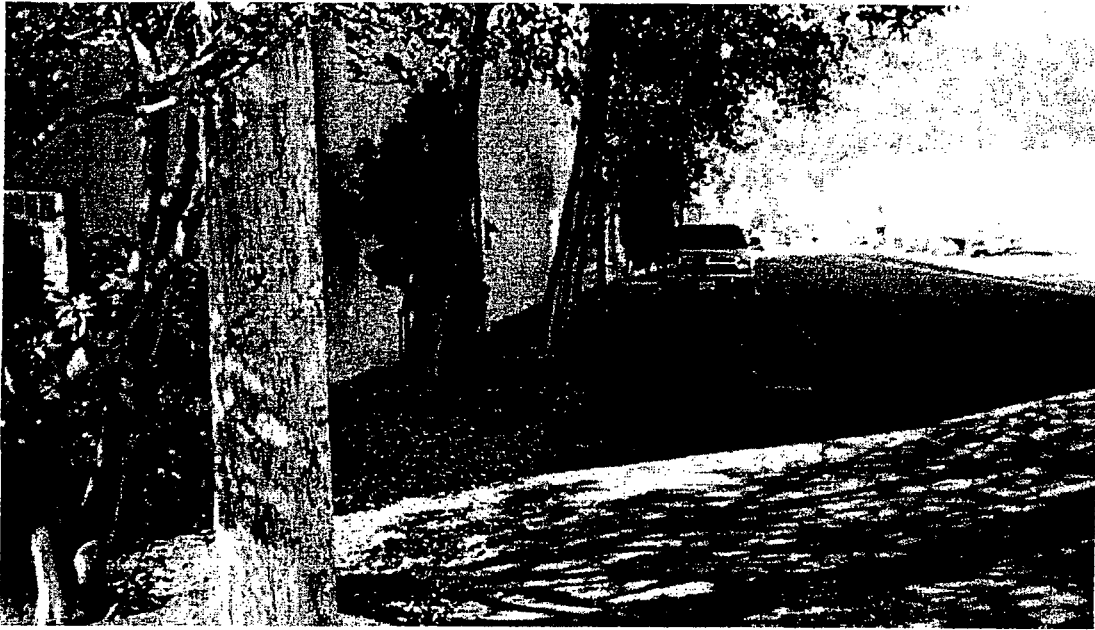
2. Looking North along concrete apron in front of East entry door. Oil stains are reportedly from parked vehicles.
-



3. North entry door used for tankers and large transformers.



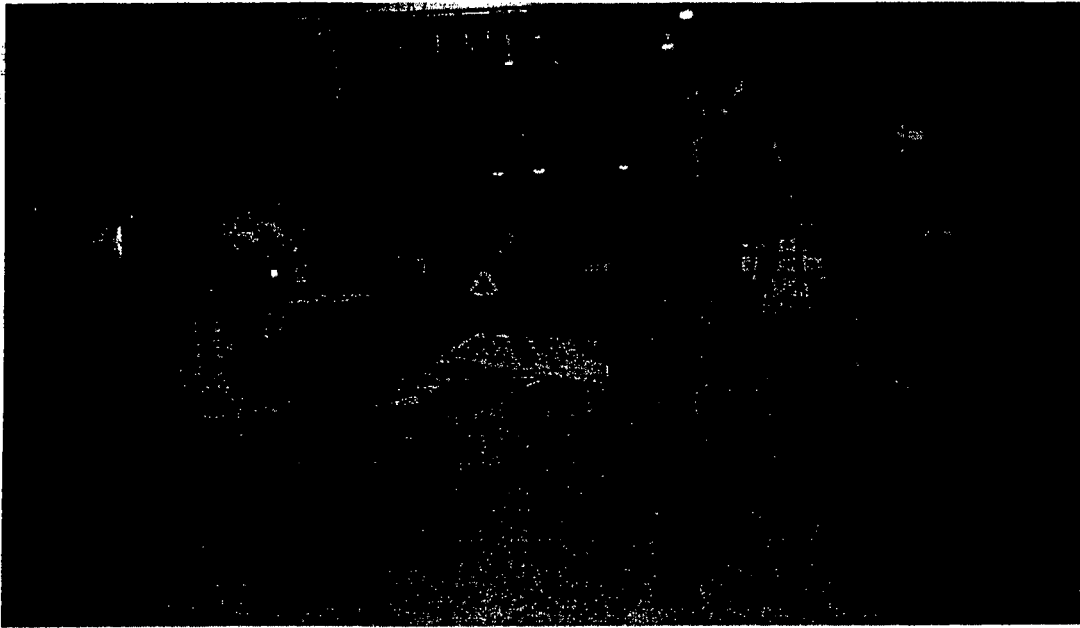
4. Looking West across apron of North entry door. Nearest storm drain grate is approximately 300 ft away at the next intersection. Concrete / asphalt seam is about 12 ft from the door.



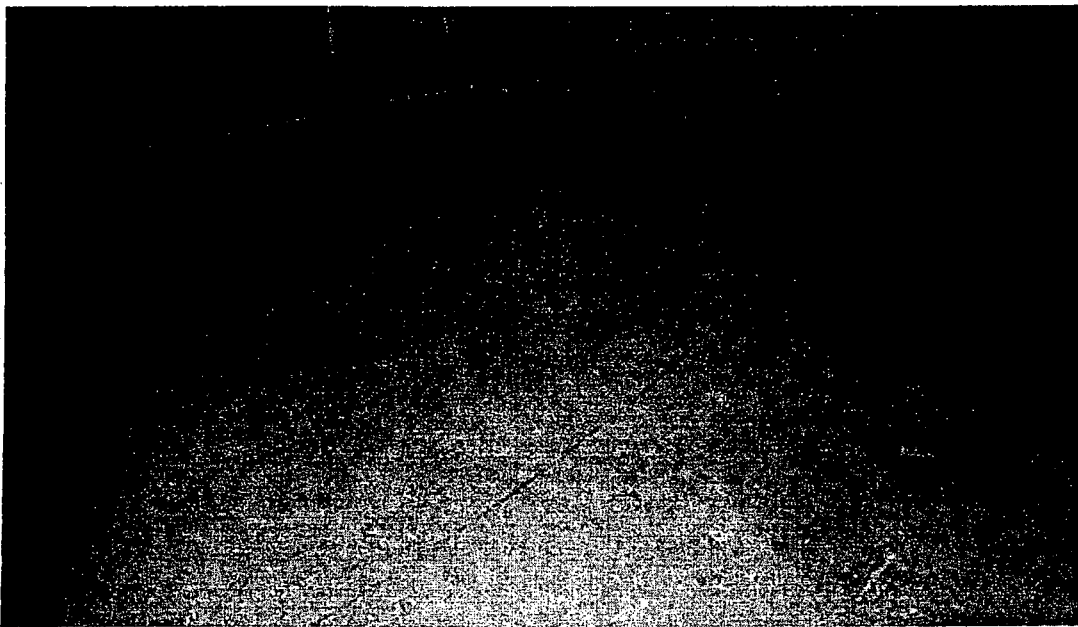
5. Looking West down the North side of the building



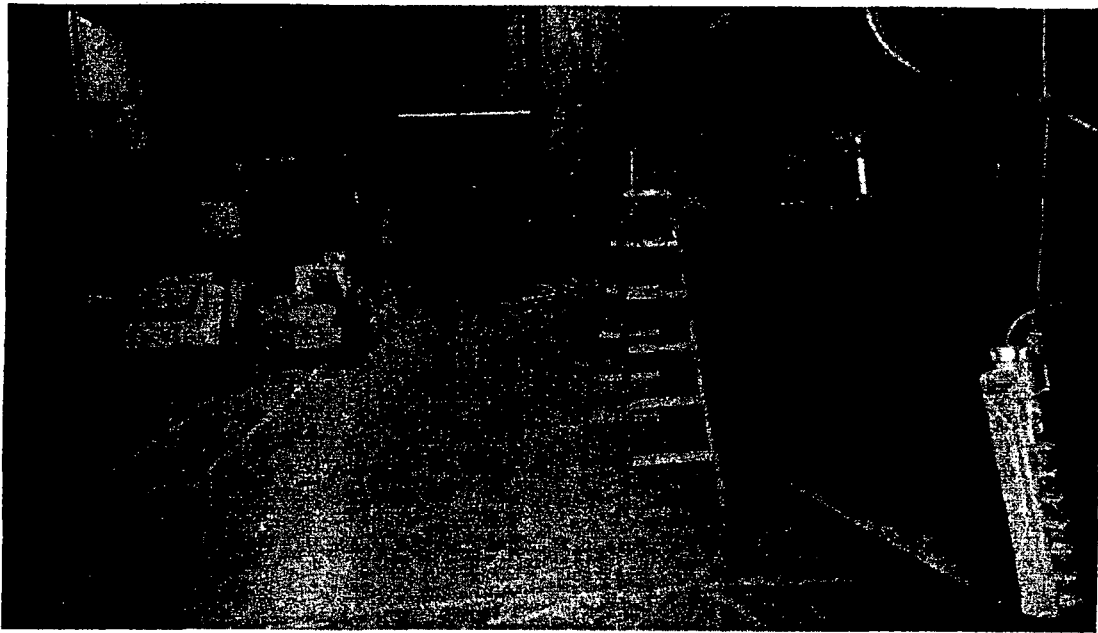
6. Looking South down the East side of the building



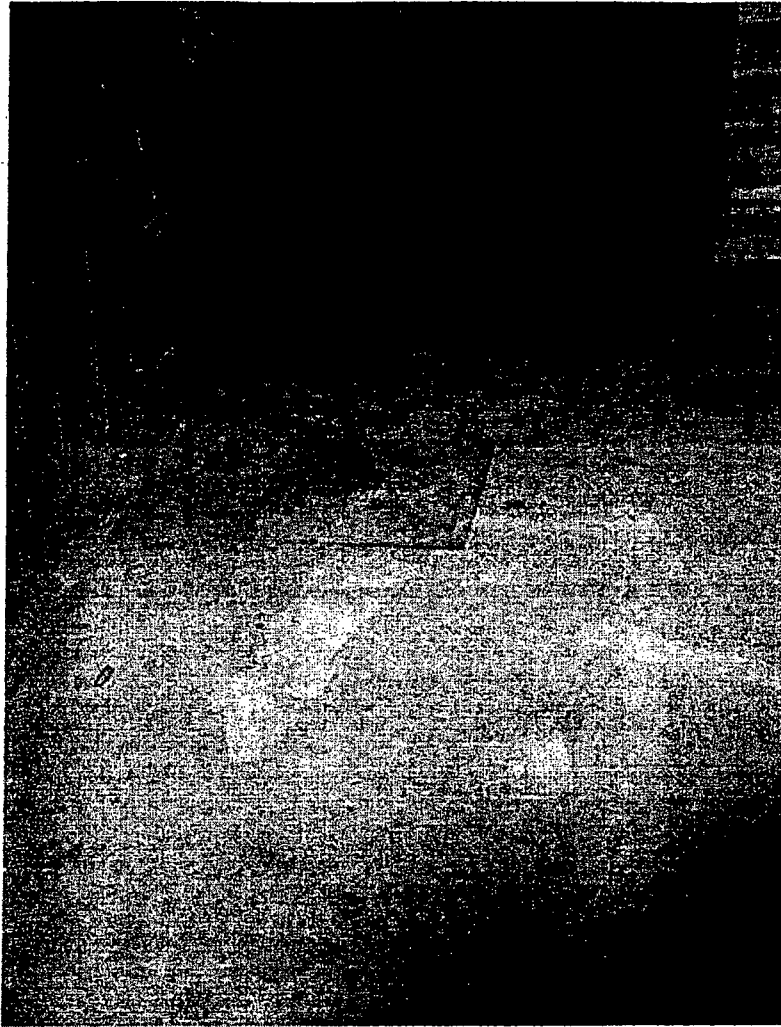
7. Looking West into the loading / unloading area from the East door.



8. Floor cracks in front of East door.



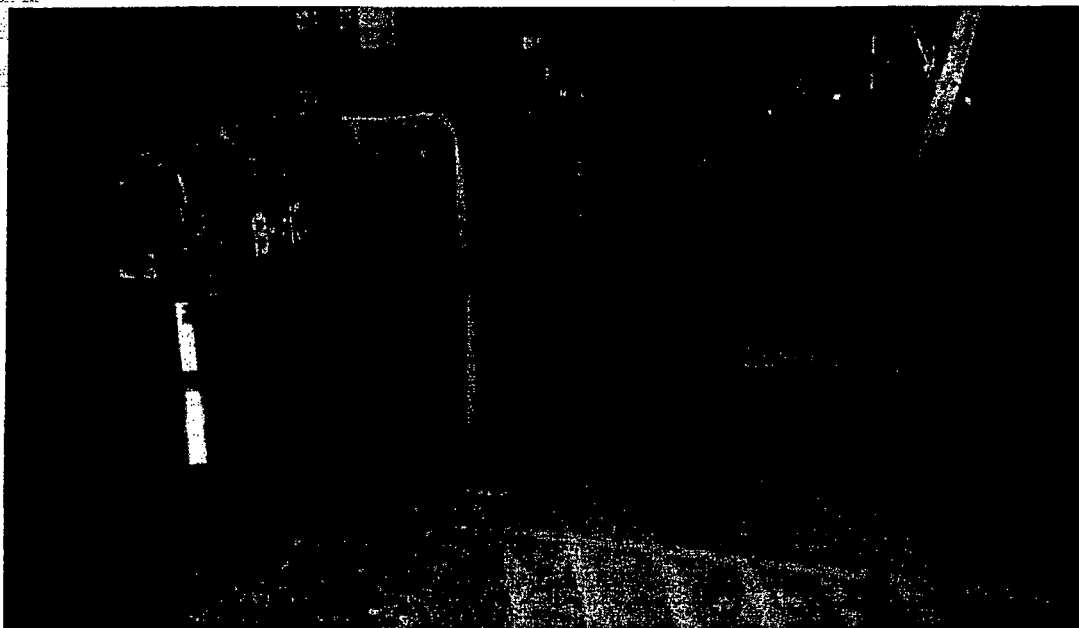
9. Looking East from the process area berm toward the East door.



10. Floor in front of North door.



11. Floor area at North door.



12. Looking east from process berm.



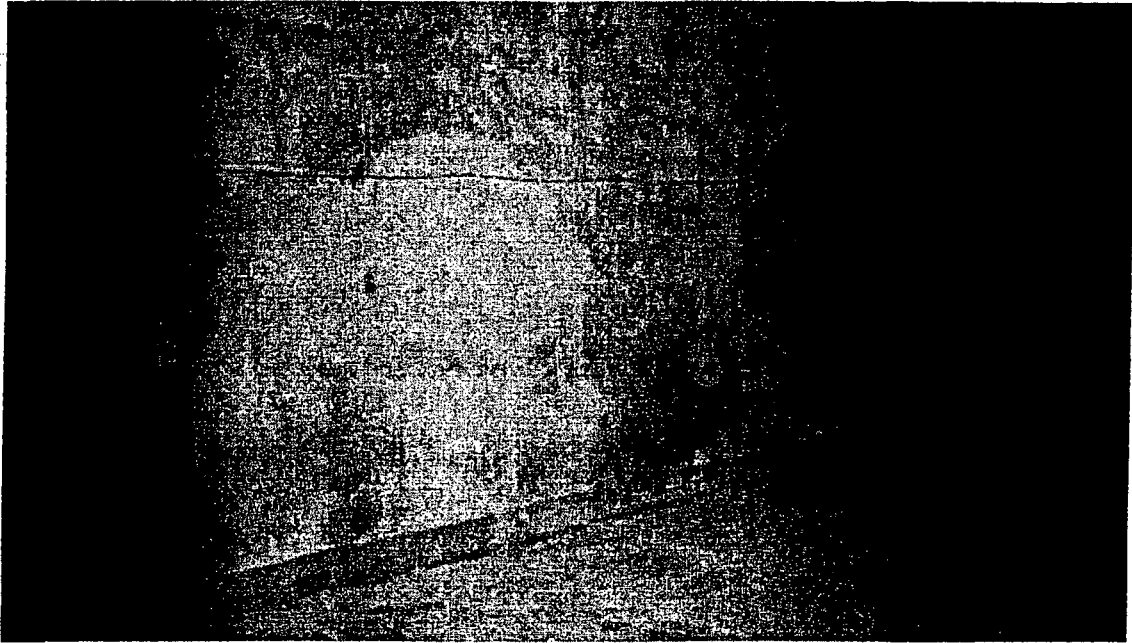
13. Rollover ramp into process area.



14. Looking West into the process area from the office stairs.



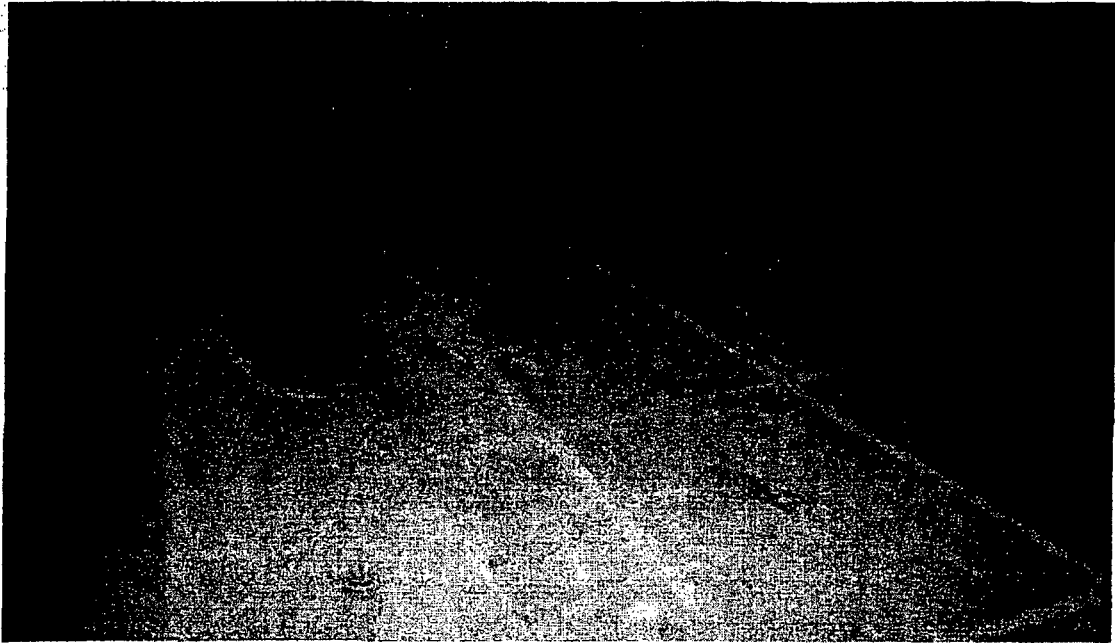
15. View of dividing wall and berm on the South side of the process area.



16. View of West wall of process area.



17. View of floor along West wall of the process area.



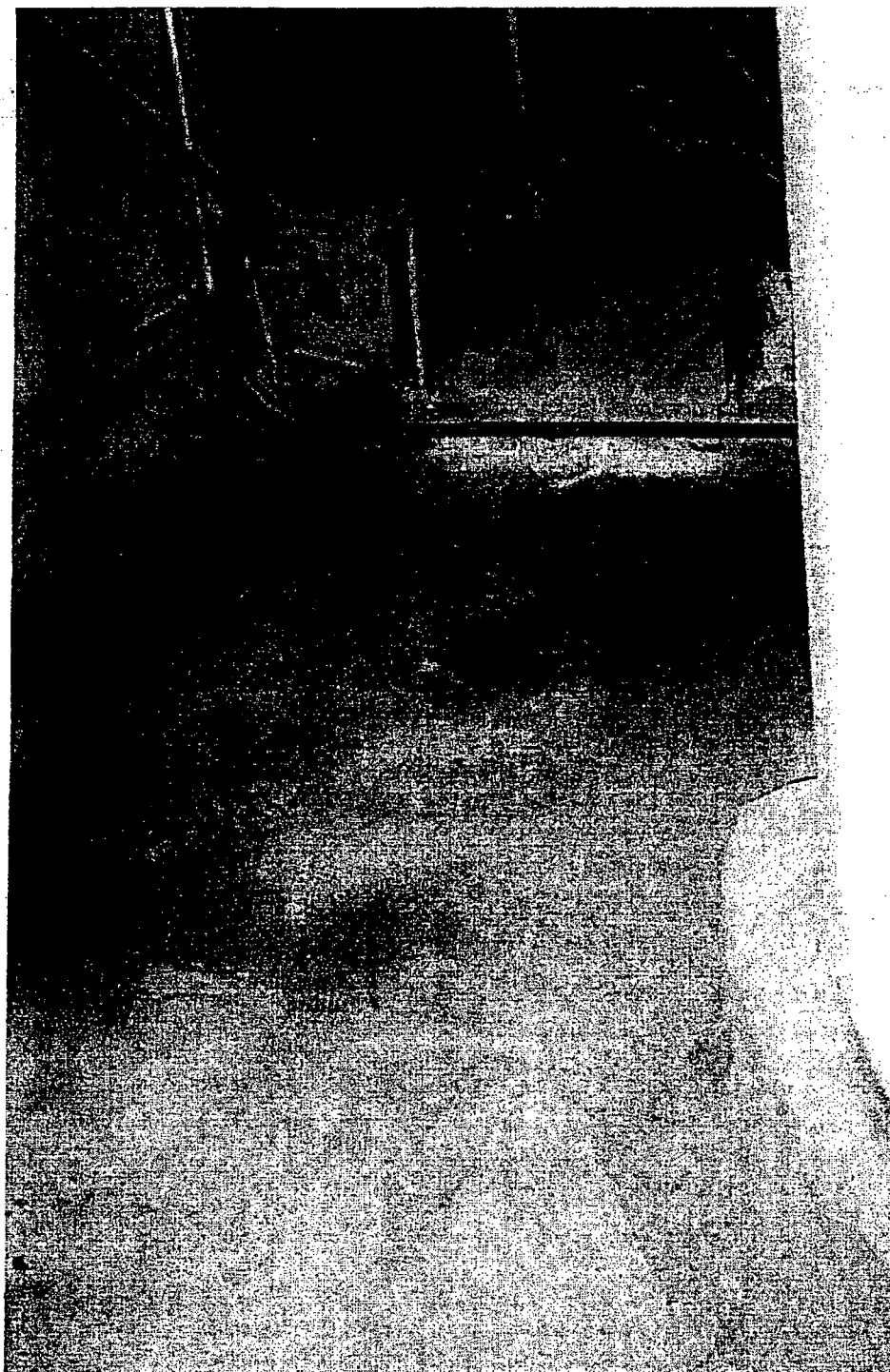
18. View of floor in process area.



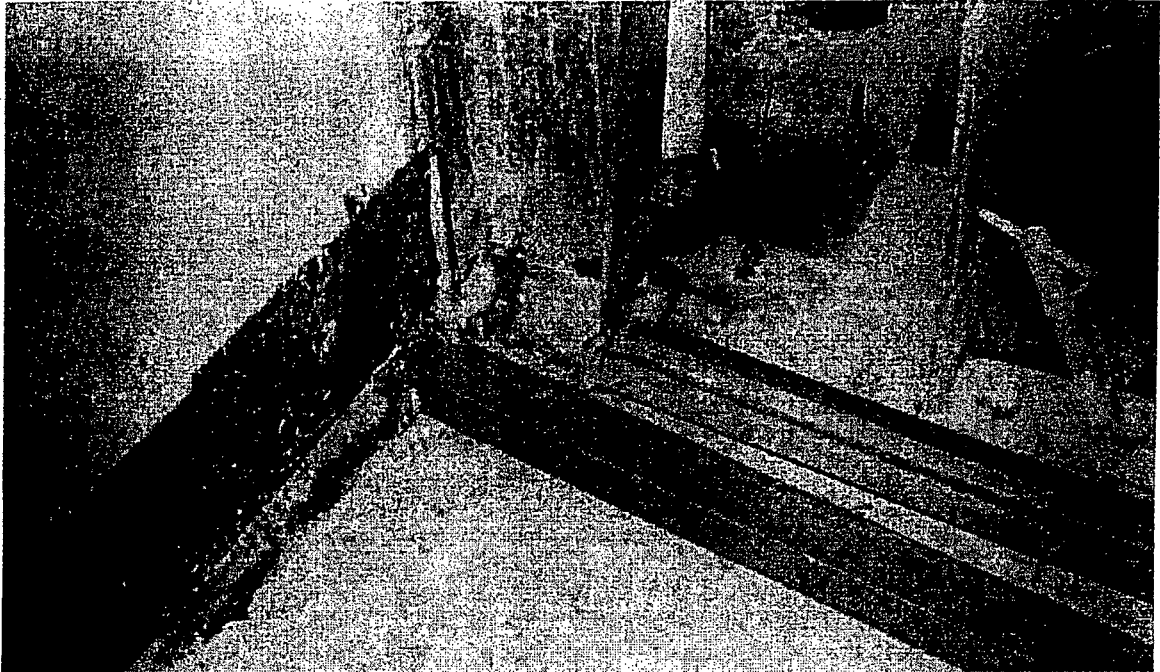
19. View along South berm of process area.



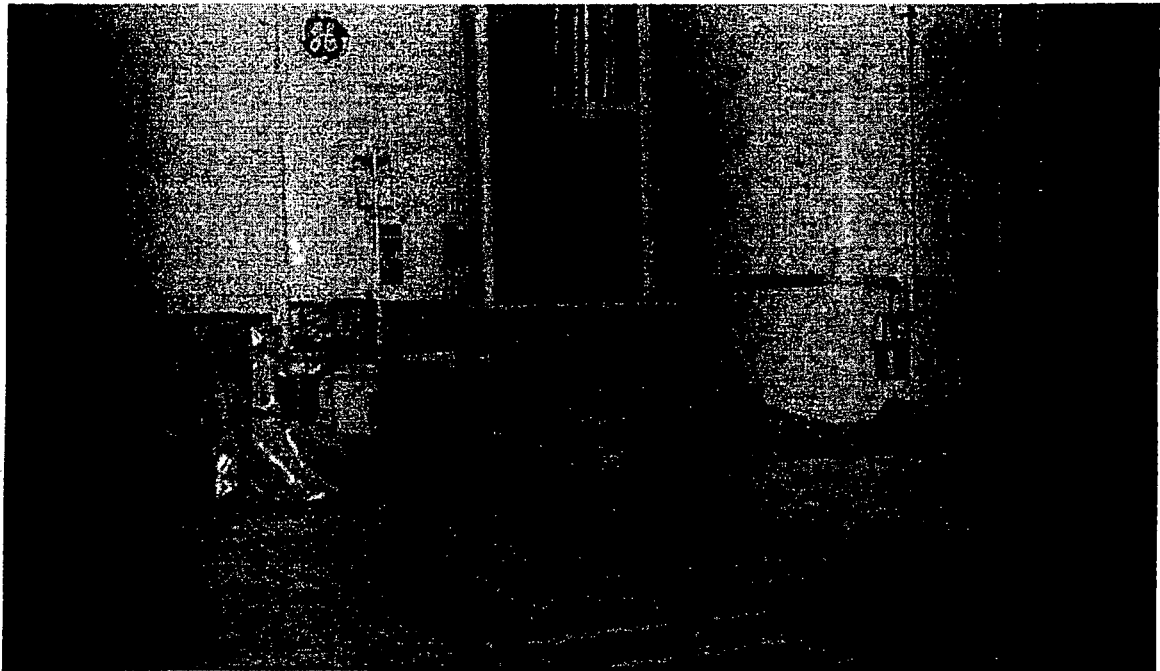
- 20. Sealed floor seam in the process area looking North toward the low-level storage tank.
-



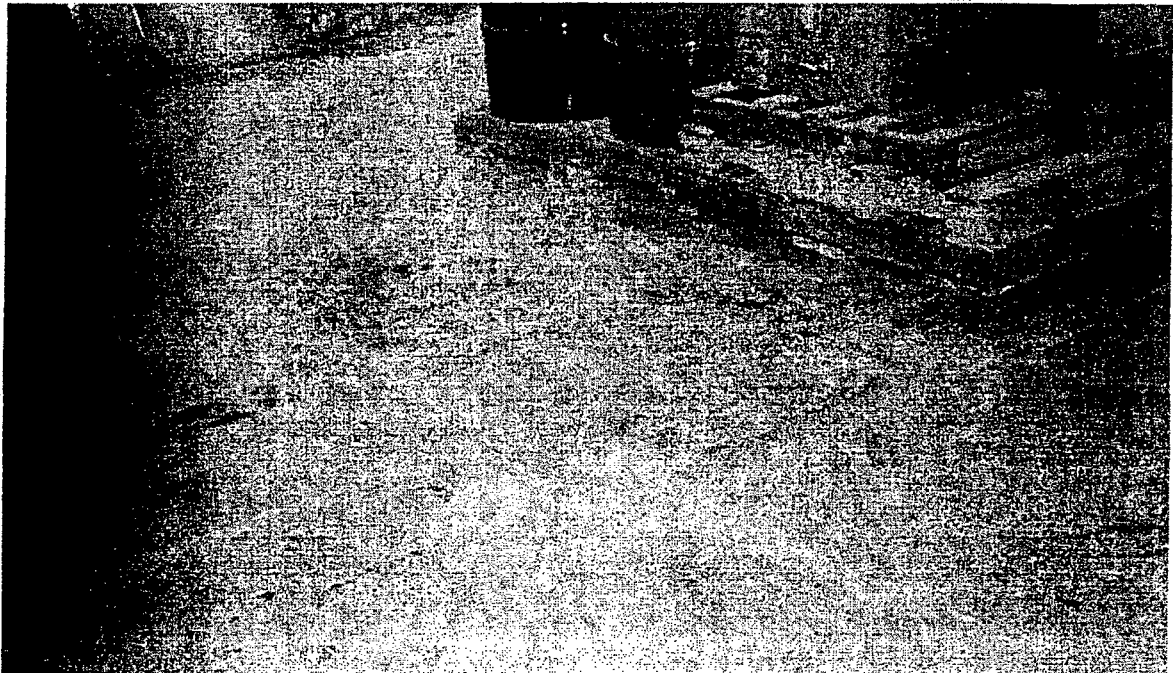
21. View of floor between North wall and low-level storage tank in the process area.



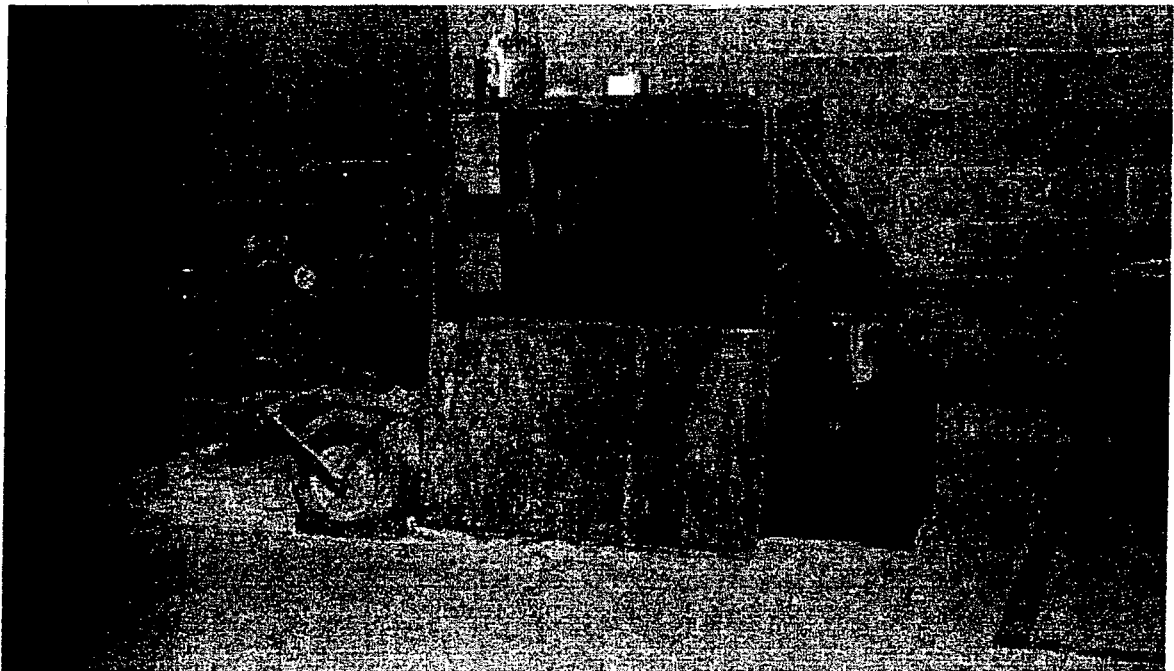
22. View of floor by vertical steel roof adjacent to high-level storage tank.



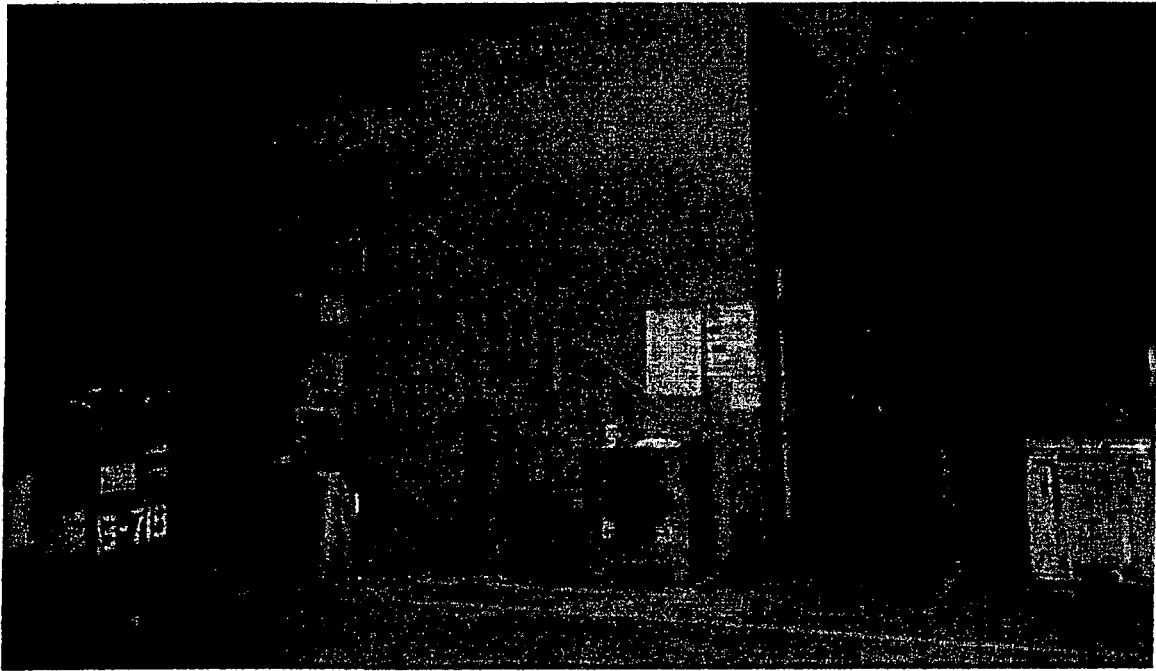
23. The high-level and low-level storage tanks near the North wall of the process area.



24. Footprint of old process rollover in the middle of the process area.



25. Drum crusher in Northeast corner of process area.



26. Office structure constructed by GE adjacent to the North entry door.

APPENDIX CPC

FINANCIAL ASSURANCE



Bruce Adler
Compliance Manager

General Electric Company
235 Easton Avenue, Fairfield, CT 06424
203 273 0175
Fax: 203 273 0340

September 16, 1992

Joseph J. Merenda, Director
Exposure Evaluation Division
PCB Section
United States Environmental Protection Agency
401 M St., SW.
Washington, D.C. 20460

Dear Mr. Merenda: CERTIFIED MAIL #P 233 519 115

RE: Financial Assurance Demonstration -
GE's Permit Applications for PCB Commercial Storers

GE has amended its financial assurance demonstration to reflect revised closure cost estimates pursuant to EPA's Second Notice of Deficiencies dated June 12, 1992.

Enclosed please find a copy of GE's Letter from the Chief Financial Officer (CFO) dated 3/25/92 along with amended Schedule A. Please note that notwithstanding the increased total of all cost estimates for closure from \$12,462,000 to \$15,545,391, no other changes in the 3/25/92 CFO letter are necessary. Line 10 is still at least 6 times line 1 (see line 10). The amendment does not affect GE's ability to pass the financial test.

Regarding assurance that GE is not double counting the same assets to pass separate financial tests for both RCRA Subtitle C and commercial PCB storage facilities, enclosed please find a copy of GE's UST financial assurance letter. This is the only CFO letter whereby we are required to list all financial test obligations in order to calculate a financial assurance "grand" total. The individual PCB and RCRA TSDF's letters require that we list only those facilities subject to those specific regulations. We are not allowed to alter or edit the text of the individual CFO letters. Likewise, we are not allowed to expand or extend the type of facilities covered by the financial test. The individual state hazardous waste regulations require that GE's CFO certify that the wording is "identical" as set forth in their regulations.

Regarding your other concern, GE mailed all of its CFO letters dated 3/25/92 via CERTIFIED MAIL to all states and EPA regions where subject facilities are located.

If I can be of further assistance, please let me know.

Very truly yours,


BRUCE R. ADLER
Compliance Manager

cc: Robert Scarberry, GE
Carol Smith, GE
EPA Regions I - 10
States where GE Commercial Storer Facilities are located.

SCHN00317097



General Electric Company
100 Edison Avenue, Schenectady, NY 12345

Letter from Chief Financial Officer
to Demonstrate Financial Responsibility for Closure
of Commercial PCB Storage Facilities

March 25, 1992

Chief, PCB Section
U.S. EPA
401 M Street, SW
Washington, DC

I am the chief financial officer of the General Electric Company, 1 River Road, Schenectady, New York 12345. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Subpart D of 40 CFR Part 761.

1. This firm is the owner or operator of the following facilities for which financial assurance for closure is demonstrated through the financial test specified in Subpart D of 40 CFR Part 761: See Schedule A.
2. This firm guarantees, through the corporate guarantee specified in Subpart D of 40 CFR Part 761, the closure of the following facilities owned or operated by subsidiaries of this firm. The current cost estimates for the closure so guaranteed are shown for each facility: None.
3. In states where EPA is not administering the financial requirements of Subpart D of 40 CFR Part 761, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart D of 40 CFR Part 761. The current closure cost estimates covered by such a test are shown for each facility: None.
4. This firm is the owner or operator of the following commercial PCB storage facilities for which financial assurance for closure is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanisms specified in Subpart D of 40 CFR Part 761, or equivalent or substantially equivalent State mechanism. The current closure cost estimates not covered by such financial assurance are shown for each facility: None.

This firm is required to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk(*) are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended December 31, 1991.

SCHN00317098

Page Two
PCB Commercial Storers

ALTERNATIVE II

(Dollars in thousands)

1. Sum of current closure cost estimates (total of all cost estimates listed for the paragraphs above)		\$12,462
2. Current bond rating of most recent issuance and name of rating service	Aaa - Moody's Investor Service	
3. Date of issuance of bond	12/5/91	
4. Date of maturity of bond	12/1/94	
5.* Tangible net worth	\$11,874,000	
6.* Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.)	\$149,389,000	
	<u>YES</u>	<u>NO</u>
7. Is line 5 at least \$10 million?	X	--
8. Is line 5 at least 6 times line 1?	X	--
9.* Are at least 90% of the assets located in the U.S.? If not, complete line 10.	--	X
10. Is line 6 at least 6 times line 1?	X	--

SCHN00317099

Page Three
PCB Commercial Storers

I hereby certify that the wording of this letter is in conformance with 40 CFR 761.65(g) and is substantially equivalent to the wording specified in 40 CFR 264.151(f) as such regulations were constituted on the date shown immediately below.



Dennis D. Dammerman
Senior Vice President - Finance

March 25, 1992

SCHN00317100

AMENDED

FINANCIAL ASSURANCE FOR TSCA PCB COMMERCIAL STORERS
SCHEDULE A
FISCAL YEAR ENDED DECEMBER 31, 1991

19-17-1992

PA ID#	FACILITY	STREET	CITY	ST	CLOSURE
GA0030584502	GE INDUSTRIAL & POWER SYS.-SER	3601 E. LAPALMA AVE.	ANAHEIM	CA	1,161,000
CO0062753702	GE INDUSTRIAL & POWER SYS.-SER	4900 KINGSTON ST.	DENVER	CO	811,409
GA0033300878	GE INDUSTRIAL & POWER SYS.-SER	3035 PEACHTREE IND'L BLVD.	ATLANTA	GA	283,918
IL0070015714	GE INDUSTRIAL & POWER SYS.-SER	6045 S. MOTTINGHAM	CHICAGO	IL	762,157
NJ003918570	GE INDUSTRIAL & POWER SYS.-SER	6001 TONWELLE AVE.	NORTH BERGEN	NJ	753,567
NY0067539940	GE INDUSTRIAL & POWER SYS.-SER	175 NILENS RD.	TONAWANDA	NY	1,291,120
OH0074713561	GE INDUSTRIAL & POWER SYS.-SER	756 CIRCLE FREEWAY DR.	CINCINNATI	OH	1,785,746
OH004527008	GE INDUSTRIAL & POWER SYS.-SER	4477 E. 49TH ST.	CLEVELAND	OH	1,181,594
OR0080833157	GE INDUSTRIAL & POWER SYS.-SER	2535 NW. 28TH ST.	PORTLAND	OR	3,580,472
PA0043583848	GE INDUSTRIAL & POWER SYS.-SER	1040 E. ERIE AVE.	PHILADELPHIA	PA	1,512,709
TX0060718269	GE INDUSTRIAL & POWER SYS.-SER	8800 WALLISVILLE RD.	HOUSTON	TX	1,800,807

					15,545,395

SCHN00317101



General Electric Company
P.O. Box 10000, Fairfield, CT 06424

Letter from Chief Financial Officer to Demonstrate Financial Responsibility for
Petroleum Underground Storage Tanks

March 25, 1992

REGIONAL ADMINISTRATOR
U.S. EPA
Region II
26 Federal Plaza
New York, NY 10278

I am the chief financial officer of the General Electric Company, 1 River Road, Schenectady, New York 12345. This letter is in support of the use of the financial test of self-insurance and/or guarantee to demonstrate financial responsibility for taking corrective action and/or compensating third parties for bodily injury and property damage caused by sudden accidental releases and/or nonsudden accidental releases in the amount of at least \$1 million dollars per occurrence and \$2 million dollars annual aggregate arising from operating underground storage tanks.

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized State program by this owner or operator and/or guarantor: SEE SCHEDULE A (for a list of facility names and addresses where tanks, assured by this financial test, are located)

A financial test and/or guarantee is also used by this owner or operator, or guarantor, to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR Parts 271 and 145:

EPA Regulations	(In Thousands)
Closure (Section 264.143 and 265.143)	\$38,560
Post Closure Care (Section 264.145 and 265.145)	\$18,928
Liability Coverage (Section 264.147 and 265.147)	\$40,000
Corrective Action (Section 264.101(b))	\$ NOT APPLICABLE
Plugging and Abandonment (Section 144.63)	\$ NOT APPLICABLE
Closure ¹	\$514
Closure ³	\$12,462
Liability Coverage ¹	\$8,000
Corrective Action ⁴	\$200
Corrective Action ²	\$2,000
Plugging and Abandonment	\$ NOT APPLICABLE
TOTAL	\$120,644

¹ TSCA PCB's - Permits

² Consent Order - New Mexico

³ TSCA PCB's - Commercial Storers

⁴ N.J.A.C. 7:1e-4.5 (Discharge)

SCHN00317102

Page 2
UST's

This owner or operator, or guarantor, has not received an adverse opinion, a disclaimer of opinion, or a going concern from an independent auditor on his financial statements for the latest completed fiscal year.

Alternative II

(Dollars in thousands)


1.	Amount of annual UST aggregate coverage being assured by a test and/or guarantee	\$2,000		
2.	Amount of corrective action, closure and post closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test and/or guarantee	\$120,644		
3.	Sum of lines 1 and 2	\$122,644		
4.	Total tangible assets	\$158,450,000		
5.	Total liabilities (if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6)	\$145,357,000		
6.	Tangible net worth (subtract line 5 from line 4)	\$11,874,000		
7.	Total assets in the U.S. (required only if less than 90 percent of assets are located in the U.S.)	\$149,389,000		
		YES	NO	
8.	Is line 6 at least \$10 million?	<u>x</u>	—	
9.	Is line 6 at least 6 times line 3?	<u>x</u>	—	
10.	Are at least 90% of assets located in the U.S.? (If NO, complete line 11)	—	<u>x</u>	
11.	Is line 7 at least 6 times line 3? (Fill in either lines 12-15 or lines 16-18)	<u>x</u>	—	

SCHN00317103

Page 3
USTs

12.	Current assets	\$124,720,000
13.	Current liabilities	\$102,611,000
14.	Net working capital (subtract line 13 from line 12)	\$22,109,000
		YES NO
15.	Is line 14 at least 6 times line 3?	<u>X</u> —
16 & 17.	Current bond rating of most recent issuance and name of rating service	<u>Aaa - Moody's Investor Service</u>
18.	Date of maturity of bond	<u>12/1/94</u>
19.	Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?	<u>X</u> —

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.95(d) as such regulations were constituted on the date shown immediately below.


Dennis D. Dammerman
Senior Vice President - Finance
March 25, 1992

SCHN00317104

SCHEDULE A OF LETTER
FROM CHIEF FINANCIAL OFFICER
EPA REGION: 2 REPORTING YR: 91

FACILITY	ADDRESS	PETRO
GE CORPORATE RESEARCH & DEVELOPMENT	RIVER RD., NISKAYUNA, NY	1
GE AEROSPACE	355 CHELTON ST., CAMDEN, NJ	2
GE AEROSPACE	RTES. 571 & 535, EAST WINDSOR, NJ	2
GE AEROSPACE	650 RIVER RD., PHILLIPSBURG, NJ	1
GE AEROSPACE	COURT ST., DEWITT, NY	0
GE AEROSPACE	JOHN GLEN BLVD., GEDDES, NY	1
GE AEROSPACE	ELECTRONICS PK., SYRACUSE, NY	2
GE COMMUNICATIONS & SERVICES	JACOBS RD., GREEN POND, NJ	1
GE COMMUNICATIONS & SERVICES	100 EDSALL DR., SUCCESS, NJ	4
GE COMMUNICATIONS & SERVICES	US NAVAL STATION - ROOSEVELT RD., CEIBA, PR	1
GE - NEWBURGH AUTO AUCTIONS	15 RTE. 17E, P.O. 2426, NEWBURGH, NY	1
GE INDUSTRIAL & POWER SYSTEMS	8001 TONNELLS AVE., NORTH BERGEN, NJ	1
GE INDUSTRIAL & POWER SYSTEMS	381 UPPER BROADWAY, FORT EDWARD, NY	1
GE INDUSTRIAL & POWER SYSTEMS	1 RIVER RD., SCHENECTADY, NY	11
GE INDUSTRIAL & POWER SYSTEMS	5990 EAST MOLLOY RD., SYRACUSE, NY	1
GE PLASTICS	260 HUDSON RIVER RD., WATERFORD, NY	8

SCHN00317105

ERM-Northeast

**APPENDIX CPC
FINANCIAL ASSURANCE**

SCHN00317106



Certified Public Accountants

Stamford Square
3001 Summer Street
Stamford, CT 06905

March 25, 1992

Mr. Dennis D. Dammerman
Senior Vice President - Finance
General Electric Company
3135 Easton Turnpike
Fairfield, CT 06431

Dear Mr. Dammerman:

We have applied certain agreed-upon procedures, as discussed below, with respect to Alternative II of your letter to demonstrate financial responsibility for closure of commercial PCB storage facilities on behalf of General Electric Company to the United States Environmental Protection Agency dated March 25, 1992. It is understood that these procedures were performed solely to assist you in connection with filing the above mentioned letter, and our report is not to be used for any other purpose. Our procedures and findings are as follows:

- The dollar amount of tangible net worth included under Alternative II, item 5 - We compared the dollar amount of tangible net worth (\$11,874 million), which represents total share owners' equity less total intangible assets, to the difference between the amounts shown on the "Statement of Financial Position" page 28 of the Company's 1991 Annual Report for total share owners' equity (\$21,683 million) and intangible assets (\$9,809) and found such amounts to be in agreement.
- Total assets in the United States included under Alternative II, item 6 - We compared the total assets in the United States (\$149,389 million) to the amount of United States assets included in the geographic segment information disclosed in Note 30 on page 64 of the Company's 1991 Annual Report and found such amounts to be in agreement.
- Calculation of whether at least 90% of assets are located in the United States included under Alternative II, item 9 - To determine that the "No" response was correct, we compared the amount of United States assets (\$149,389 million) included in the geographic segment information disclosed in Note 30 on page 64 of the Company's 1991 Annual Report to the product of 90% times total assets (\$168,259 million) as shown on the "Statement of Financial Position" page 28 of the Company's 1991 Annual Report and found that the dollar amount of assets in the United States was less than the result of the computation described above.



Member Firm of
KPMG Peat Marwick Goetz LLP

SCHN00317107

Mr. Dammernan

Page 2

Because the above procedures do not constitute an audit made in accordance with generally accepted auditing standards, we express no opinion on any of the items referred to above. In connection with the procedures referred to above, no matters came to our attention that caused us to believe that the specified amounts or items should be adjusted. Had we performed additional procedures, matters might have come to our attention that would have been reported to you. This report relates only to the amounts and items specified above and does not extend to any financial statements of General Electric Company and consolidated affiliates taken as a whole.

Very truly yours,

KPMG Peat Marwick

SCHN00317108

SCHNTZIC-INT:BGDOC. 144

#2441 Joseph T. Ryerson & Son, Inc.
Portland Harbor Site Assessment

SCHN00317136

SITE ASSESSMENT REVIEW
JEFF T. RYERSON AND SON, INC.
9040 N. Burgard Way
Portland, OR 97203-6431
MULTNOMAH COUNTY

SCHNTZIC-INT:BGDOC. 144

SITE ASSESSMENT INFORMATION REQUEST

Please address each item as completely as possible. When you cannot address a particular item because of a lack of information, please state so.

1. PROVIDE THE FOLLOWING BACKGROUND INFORMATION:

- a. Facility name and address. RYERSON/TULL
9040 N. BURGARD PORTLAND OR. 97203-6431
- b. Facility owners and operators names, titles, addresses, and phone numbers. RYERSON/TULL
NYSE
- c. Property owners (if different from facility owner/operator) name, address, and phone number.
- d. Current use of site, and year those operations began at the site. RYERSON PURCHASING JULY 1990
STEEL SERVICE CENTER
- e. Past use of site: include all you know about previous owners and users of site, and associated dates. SCHMITZER PROPERTY
STEEL SERVICE CENTER
- f. Size of site (in acres or square feet) and tax lot numbers.
APX 4 ACRES
- g. Site security (is the site completely or partially fenced, patrolled, etc.). COMPLETELY FENCED NOT PATROLLED
- h. Land uses immediately surrounding the site boundaries. An example of the type of information being sought: "The site is mostly surrounded by industrial [or commercial, or agricultural] land, but a small residential area is located 1/2 mile to the northwest.....", etc.
SURROUNDED BY INDUSTRIAL

2. PROVIDE A SITE MAP WITH THE FOLLOWING ITEMS IDENTIFIED:

- a. Building names and their functions (past and present).
STEEL WAREHOUSE
- b. All chemical and waste storage and disposal areas (e.g., does the site have buildings, ponds, ditches, landfills, waste piles, tanks, dry wells, drainfields, etc.); include inactive or abandoned areas. GAS PUMP STATION - CONTACT SCHMITZER STEEL
- c. Outdoor process areas. N/A
- d. Storage tanks, both underground and above ground (number, size, contents, active, inactive, decommissioned in place, etc.).
UNDER GROUND GAS / DIESEL TANK - SEE SCHMITZER STEEL
- e. Waste treatment systems (including active, or inactive, drywells, drainfields, septic tanks). NONE
- f. Any on-site wells (water supply, monitoring, dry wells, abandoned wells).
WATER WELL - USED BY SCHMITZER

3. PROVIDE THE FOLLOWING CHEMICAL/WASTE HANDLING INFORMATION:

- a. All chemical products used or stored at the site, past and present (include any fuels, solvents, oils, pesticides, etc.).

(OVER)

SEE ATTACHED SHEET

SCHN00317137

- b. All waste products generated or stored at the site (include any waste solvents or oils, filter cake, spent plating solutions, metal grindings, spent sandblast shot, etc.).
METAL GRINDINGS
- c. Approximate volumes of chemicals used and wastes generated per year, and maximum volume kept on-site.
METAL GRINDING SENT TO SCHMITZER SCRAP.
- d. Any on-site chemical or waste-treatment systems (include any flocculation/filtration, incineration, chemical or physical treatment, volume reduction, etc.). None
- e. Information on all past and present chemical and waste storage and disposal areas; include information on size, type, current or former contents, and condition of each. Examples of this type of information might include:
UNDERGROUND GAS TANKS INSTALLED Apr - SEE SCHMITZER STEEL
"There are two 3,000-gallon steel underground tanks on-site; each presently contains about 500 gallons of gasoline. These were installed in 1988, and are thought to be in good condition. They have not been tested."

"Between 1942 and 1971, waste sandblast grit was buried in a series of trenches located 50 to 150 yards north of the main shop. The trenches were unlined and measure approximately 2 feet wide, 4 feet deep, and 30 feet long".
- f. Type, quantity, and destination of all wastes removed from site. An example of the type of information being requested:
"Since 1984, 2 tons of metal wastes have been landfilled at the county dump site each month; 55 gallons of used benzene has been recycled each month through Bob's Solvent Recovery Company of Butte Montana...", etc.
- g. Any spills or other releases of chemical substances (including petroleum products) that have occurred at the site during your operation or ownership. No
- h. Any information you have about chemical substances used, stored, or released at the site by prior owners or operators.
No

4. PROVIDE THE FOLLOWING PERMIT INFORMATION:

- a. Identify all existing or expired regulatory permits. For each, provide information on the type of permit (such as NPDES, RCRA Interim Status, etc.), regulating agency (such as federal, state, local sewerage agency), and issue and expiration dates.
N/A

5. PROVIDE THE FOLLOWING SAMPLING/CLEANUP/INVESTIGATIVE INFORMATION:

- a. Describe all environmental investigations/sampling/monitoring performed at site. Provide investigative reports/sampling results, if any. N/A
- b. Describe any soil excavations or removals, spill cleanups, groundwater treatment, etc. that may have been performed at site. N/A

(END)



Ryerson

ADDENDUM TO:

SITE ASSESSMENT INFORMATION REQUEST

Item 3.A

500 GALLON	PF46 Hydraulic Oil
50 GALLON	ATF Transmission Fluid
50 GALLON	Rust Lick
50 GALLON	Naptha Solvent
50 GALLON	80 Gear Lube

WASTE OILS ARE PICKED UP BY:

Spencer Environmental

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

NOV 12 1999

NORTHWEST REGION

SCHN00317140



Engineering +
Environmental

August 21, 2007

Mr. Andrew Millican
Portland Container Repair
9449 N. Burgard Way
Portland, Oregon 97203

Re: Tract A, N. Burgard Way
Addendum to Phase One Environmental Site Assessment
Lot 3, N. Burgard Way, Portland, Oregon
PBS Project No. 18640.000

Dear Mr. Millican:

This letter is an addendum to the Phase One Environmental Site Assessment report that PBS completed for Lot 3 of the Burgard Industrial Park to include Tract A. According to figures provided to you by the property owner, Schnitzer Investment Corporation, Tract A is a private road adjacent to the south of Lot 3 and corresponds to N. Burgard Way, extending westward from N. Time Oil Road on the east, to near the southeast corner of Lot 3. You have indicated that your purchase of Lot 3 will include a share of Tract A and that your lender has requested environmental information regarding this tract.

A review of historical air photos shows that Tract A was vacant in 1936. By 1944, it was on or adjacent to a paved road extending westward from what is now Time Oil Road, angling to the northwest near the southeast corner of what is now Lot 3. A 1944 site plan contained in the *"International Terminals Summary of Environmental Conditions, Lot 3"* was reviewed for the Phase One ESA and for this addendum and shows modern lot numbers and roadways superimposed over the shipyard layout. A copy of the figure is included with this Addendum. The path of Tract A appears to be on or immediately south of the wartime roadway described above and may include the north boundary of the shipyard parking lot. The north end of a "joiner bldg" and one or two other small buildings appear to lie in or adjacent to the path of Tract A (at the north end of Lot 2 of the Burgard Industrial Park). A cleared area visible on a 1955 aerial photograph may be associated with the removal of the smaller buildings; the "joiner bldg" appears to have been removed in the early 1970s.

It is assumed that the wartime "joiner bldg." was a carpenter shop and that activities there included construction of wooden components of ships. These activities may have included painting, but historical records indicate that paints were stored elsewhere on the wartime shipyard.

For most of the 1950s through the early 1970s, Tract A appears to have functioned as a roadway, although it is unclear on historical air photos whether it was an improved (paved) road in that interval. By 1990, aerial photos show that Tract A appears to be paved and to correspond to its present-day configuration. Aerial photographs from 1936, 1944, 1956, 1964, 1973 and 1990 are included with this Addendum.

The Environmental FirstSearch regulatory database search report that was prepared for PBS' Lot 3 Phase One Environmental Site Assessment was reviewed and none of the listed sites appear to be related to Tract A. The Oregon DEQ "Facility Profiler" database was reviewed at <http://deg12.deq.state.or.us/fp20/> on August 27, 2007, and none of the sites listed in the area appeared to be related to historical activities on Tract A.

Bandon | Bend | Boise | Eugene | Portland | Seattle | Tri-Cities | Vancouver

4412 SW Corbett Avenue, Portland, OR 97239
503.248.1939 Main
503.248.0223 Fax
888.248.1939 Toll-Free
www.pbseenv.com

SCHN00317160

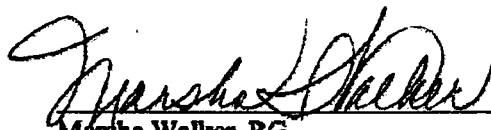
Mr. Andrew Millican
Tract A, N. Burgard Way
August 21, 2007
Page 2 of 2

Tom Colligan of Floyd Snider, a Seattle-based firm that provides environmental consulting services for the property owners, provided the following information to you via email on August 21, 2007: He indicated that historical maps showed that Tract A was mainly a parking area for the larger WWII shipyard and that since then it has been a "paved roadway with no record of environmental concerns, such as spills or tanks." He also indicated that extensive testing has been performed on adjacent lots and that no areas of concern were identified. It was his opinion that the "entire NE part of the Burgard Yard that includes Tract A has no identifiable environmental concerns and does not justify further consideration."

In summary, the only historical structures that may have been present on the subject property in the past are portions of a WWII joiner (carpenter) building and one or two small buildings whose uses are not known. Otherwise, Tract A has been used as a private road. No records of hazardous materials spills or other environmentally significant incidents have been reported on regulatory databases.

Based on this review of historical and environmental records, no *recognized environmental conditions* were identified associated with Tract A. Historical uses of the site pose a low risk for continued use as a roadway in an industrial area.

Sincerely,


Marsha Walker, RG
PBS Project Geologist

August 27, 2007

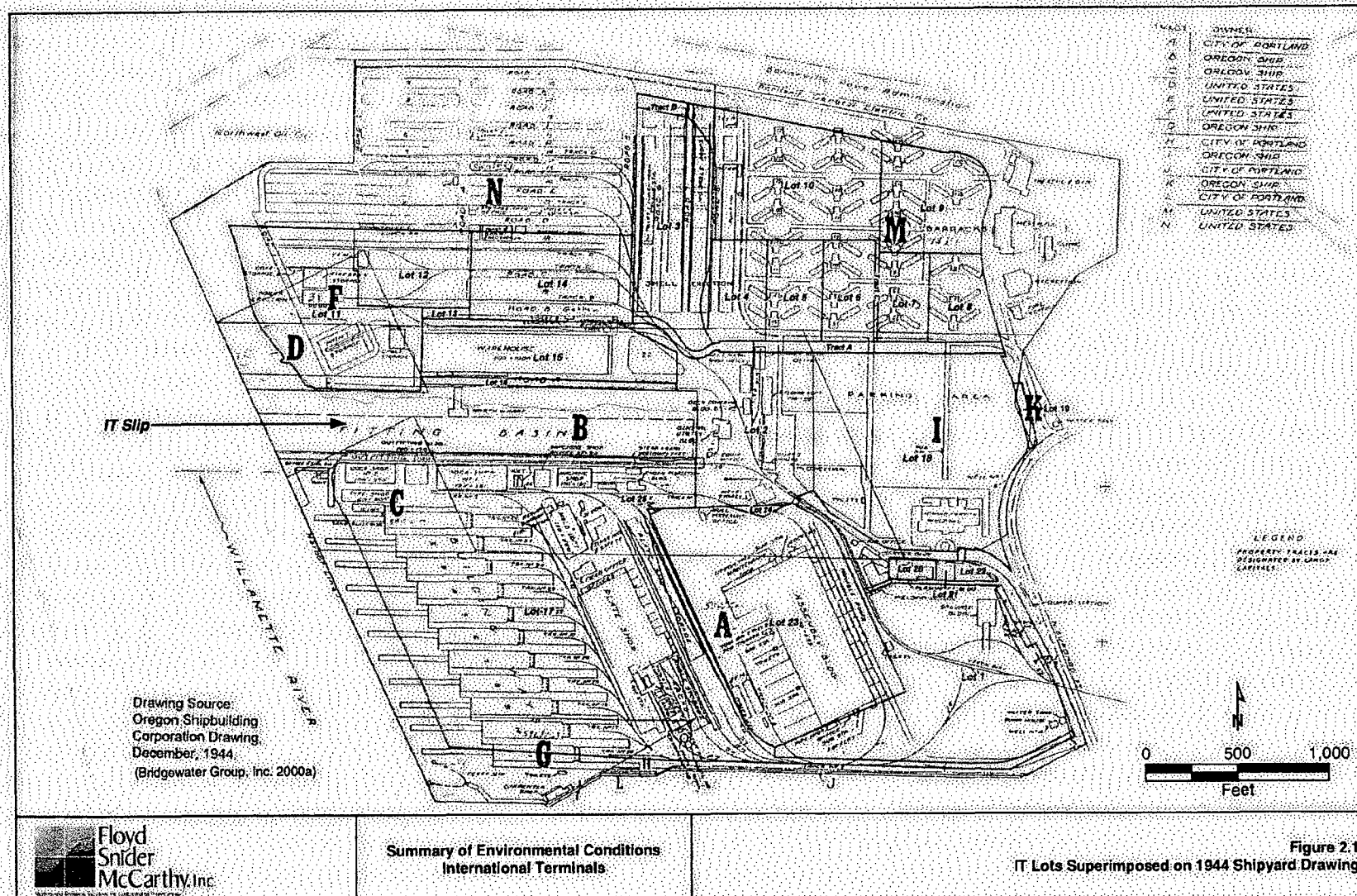
Date



Attach: "Figure 2.1 IT Lots Superimposed on 1944 Shipyard Drawing"
Historical Aerial Photographs

P:\18000\18640 Lot3BurgardWay\Tract A\Tract A Summary.doc

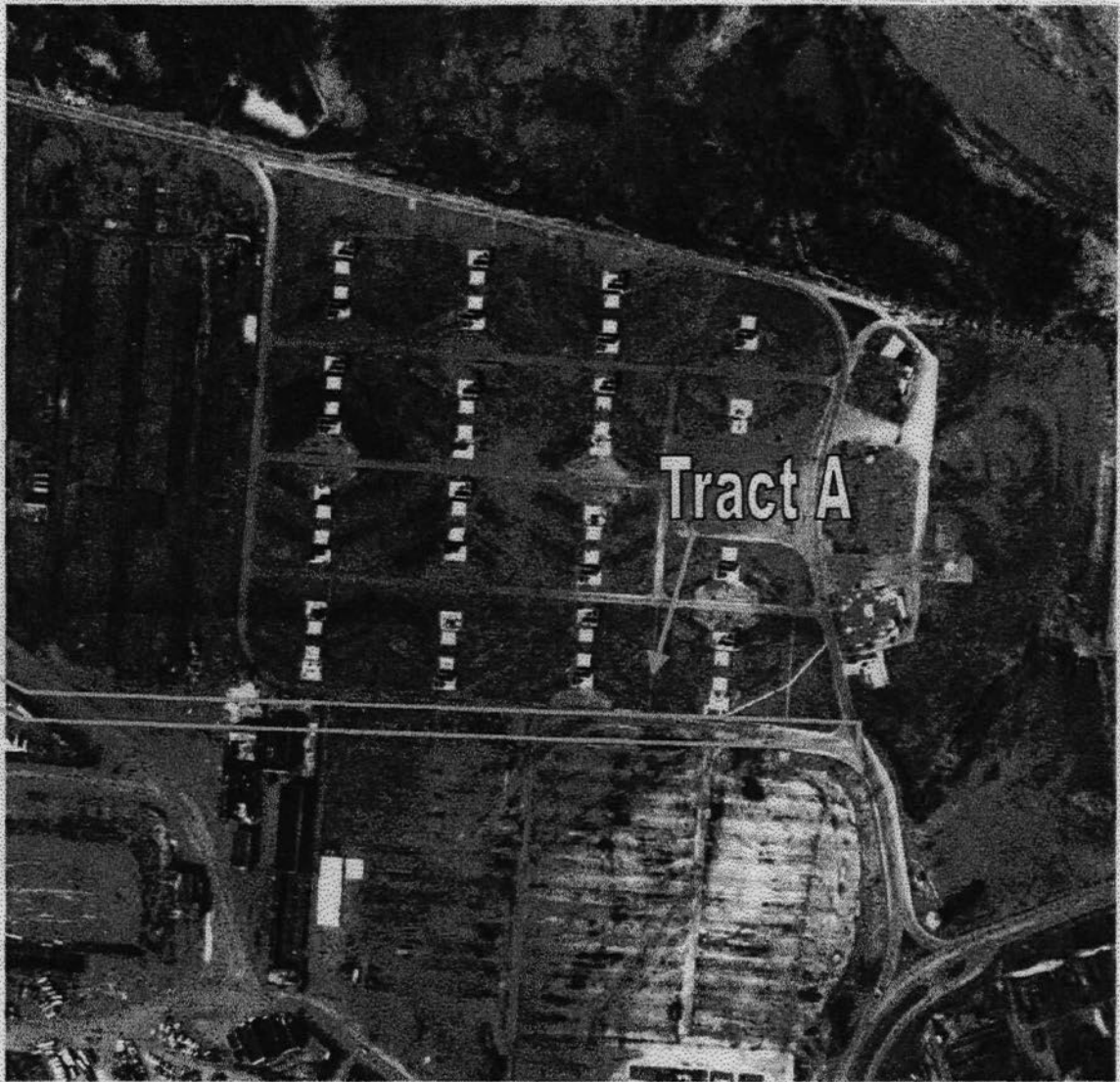
SCHN00317161



SCHN00317162



1944 Aerial Photograph



1956 Aerial Photograph



1964 Aerial Photograph



1973 Aerial Photograph

Report Date: August 2007
Project #: 18640.000





1990 Aerial Photograph

October 25th 2006

Susan Davidson
1211 S.W. Fifth Avenue
Suite 2250
Portland, OR 97204

**SUBJECT: UPDATE TO 2004 LOT 3 SUMMARY OF ENVIRONMENTAL CONDITIONS
REPORT**

Dear Ms. Davidson:

In 2004, Floyd|Snider (at that time, Floyd Snider McCarthy, Inc.) prepared a summary report of the environmental conditions at Lot 3 (FSM 2004) located within the International Terminals also known as the Burgard Yard. At your request, Floyd|Snider reviewed that report to evaluate if the information presented is still current. Except as noted below, we are not aware of any significant new information concerning Lot 3 since 2004:

1) Section 3.0, pages 3-2 through 3-4. Discussion of Sediment Quality in the IT Slip

In 2005, the Lower Willamette Group, as part of the Portland Harbor RI/FS process, collected additional sediment quality data from the IT slip as part of "Round 2B" field activities. It is possible that this new data will cause the discussion of sediment quality in Section 3 to be revised. Given the ongoing and complex nature of the sediment investigation and cleanup in Portland Harbor, the user of this report should not rely upon the 2004 discussion of sediment quality in Section 3, but instead, contact the local, state, and federal agencies to obtain the most current information regarding the ongoing Portland Harbor sediment investigation.

2) Section 5.0, page 5-1. Sargent's Towing is no longer the leese. Instead, the lot is leased by Portland Container for the storage of intermodal trailers. Portland Container's main operations are located directly east of Lot 3 on Lots 4, 5, and 6.

Sincerely yours,
FLOYD | SNIDER

Thomas Colligan
Senior Project Manager

Encl.:
Copies:



International Terminals Water Quality Monitoring Plan

**Prepared for
SCHNITZER STEEL INDUSTRIES, INC**

**Prepared by
Floyd Snider McCarthy, Inc.
83 South King Street
Suite 614
Seattle, Washington 98104**

January 5, 2004

SCHN00317174

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Floyd Snider McCarthy,
Inc.

International Terminals
WQ Monitoring Plan
January 5, 2004

1.0 Introduction

This document presents the Water Quality Monitoring Plan (WQMP) for maintenance dredging of Berths 1 through 3¹, and Berths 4 and 5², of the International Terminals. The site is adjacent to Schnitzer Steel's facility, located in Portland, Oregon. This WQMP has been prepared to ensure compliance with Section 401 of the Clean Water Act and Oregon State Water Quality Standards (OAR 340-41).

Schnitzer Steel Industries, Inc. (Schnitzer) operates the International Terminals and associated berths. Berths within the project area currently support metal recycling operations and are also used to import bulk cargo such as manganese, pig iron, steel coils, and steel slabs.

¹ Corps Project Number 199100099.

² Corps Project Number 199200812.

2.0 Purpose

The WQMP was developed to evaluate water quality and ambient (background) conditions during maintenance dredging in order to ensure that turbidity will remain within acceptable limits outside of the project area and, if necessary, implement corrective actions to mitigate impacts to water quality. The project area includes multiple potential discharge points from the dredge and receiving barge (filtered return water).

This document defines the monitoring procedures that will be followed for water quality monitoring during maintenance dredging within the project area and provides a description of the Best Management Practices (BMPs) that will be implemented to ensure that potential water quality impacts will be minimized.

3.0 Best Management Practices

Maintenance dredging activities will be conducted during the Oregon Department of Fish and Wildlife's (ODFW) agreed upon in-water work windows as follows:

- July 1 through October 31 (any year with valid permits);
- January 1 through January 31, 2004; and
- During other times as needed. Activities will be coordinated with the ODFW and approved by the Oregon Division of State Lands.

In addition, the following BMPs will be used to minimize potential water quality impacts. Activities that occur during maintenance dredging with the potential to impact water quality include dredging, barge dewatering of sediments, and sediment offloading at a transload facility. BMPs that will be implemented during each of these activities to minimize potential water quality impacts are described below.

3.1 Dredging BMPs

Mechanical dredging of sediment has the potential to cause sediment resuspension, which can impact water quality and the aquatic environment. The following BMPs will be implemented to minimize potential impacts to the aquatic environment during dredging operations:

- The construction contractor will ensure that no fuel, garbage, or debris enters the waterway from the dredge, receiving barge, other vessels associated with the project.
- Dredging will be conducted using an environmental clamshell bucket that is closed, vented, and sealed in order to minimize the release and redistribution of dredged material to the water column during dredging. In the event that large woody debris or other obstructions must be removed from the dredge prism, the environmental bucket may be replaced by a bucket suitable for the removal.
- Dredging will be conducted using procedures that will minimize potential impacts to water and sediment quality to the extent practicable. These procedures include the following:
 - Slow dredge bucket deployment and retrieval will be required. The maximum rate of retrieval of the dredge bucket will be 2 feet per second for the first 20 feet off the bottom (where the highest potential for bottom sediment disturbance exists). For the remainder of the bucket ascent, the rate may increase up to a maximum of 4 feet per second.
 - The maximum rate of bucket descent will be 10 feet per second and the descent rate will decrease significantly until stopped at the designated depth of digging penetration.

-
- "Sweeping" the post-dredge surface to smooth contours will not be allowed.
 - Stockpiling of material on the bottom will not be allowed (i.e., each time the bucket is closed it will be brought to the surface).
 - The bucket will be required to pause for several seconds at the water surface during retrieval to release excess water.
- Barges and other floating equipment shall be operated to avoid grounding on the riverbed or banks at any time.

3.2 Sediment Dewatering BMPs

Dredging efforts are required to be accomplished in a manner that minimizes the amount of water added to recovered sediment. In practice this is accomplished by taking full depth cuts whenever possible so that the dredge bucket is completely full of sediment and by pausing as the dredge bucket breaks the water surface during bucket retrieval to allow excess water to drain before sediment is discharged onto the receiving barge.

Dredged sediment placed onto the receiving barge will be allowed to passively dewater within the project area prior to being transferred upland. During barge dewatering activities, the following BMPs will be implemented to minimize potential water quality impacts:

- Return water draining from the receiving barge will be treated by filtering water through straw bales and/or geotextile fabric before returning to the waterway.
- Straw bales and geotextile fabric will be changed regularly to ensure efficient filtration of the return water.
- Barges will not be overfilled to the point where recovered material, including both sediment and water, overflows directly back to the waterway.
- During sediment dewatering, the receiving barge will remain within the project area.
- Return water from the barge will not be allowed to discharge to the waterway outside the project area (e.g., during transport to, or while stationed at the transload facility).

3.3 Dredged Material Offloading BMPs

The following BMPs will be implemented to prevent potential release of sediment at the transload facility and to prevent potential water quality impacts to the waterway:

- The clamshell bucket used during sediment offloading will not be allowed to swing directly over open water. A protective "capture barge", temporary structure, or spill apron will be placed along the swing pathway of the bucket to prevent material from entering the waterway.

Floyd Snider McCarthy,
Inc.

International Terminals
WQ Monitoring Plan
January 5, 2004

-
- Railcars or containers used to transport dredged sediment will be lined with impermeable liners prior to being filled.
 - The transload facility will be swept regularly to prevent potential spreading or release of sediment.
 - Sediment will be removed from the outside of equipment and railcars by brushing or sweeping prior to leaving the transload facility.

4.0 Water Quality Monitoring Locations

Compliance water quality monitoring will be conducted at the compliance boundary located downstream of project area. Ambient water quality monitoring will also be conducted upstream from the project area to establish background conditions for the river.

Water quality compliance monitoring will be conducted at one location 150 feet directly downstream of the project area, as shown in Figure 4.1. The water quality monitoring station will be relocated, based on field conditions, in order to intercept any visible turbidity plumes originating from dredging operations. Monitoring stations will be located in the field using a Differential Global Positioning System (DGPS) on board the sampling vessel.

Ambient water quality monitoring will also be conducted at one station located within the waterway but at least 100 feet outside the influence of dredging operations (upstream from project area), as shown in Figure 4.1. Ambient monitoring stations will also be located in the field based on field conditions.

At each compliance or ambient monitoring location, turbidity will be measured and recorded at three depths:

- Shallow to within one meter of the water surface
- Mid depth
- Deep to within one meter of the mudline

Measurements from all three depths will be recorded separately, but will be averaged to determine the turbidity concentration.

Turbidity thresholds were developed in 2001 by Ellis Ecological Services, Inc. (EES) and adopted by the Port of Portland (2001) for maintenance dredging at Terminal 2 and Terminal 5 on the Willamette River. These threshold levels were approved by the Oregon Department of Environmental Quality (ODEQ), the Oregon Division of State Lands, and the U.S. Army Corps of Engineers and were incorporated as a condition of the Terminal 2 and Terminal 5 maintenance dredging permits. The following threshold levels, developed by EES, are proposed for maintenance dredging at the International Terminals (Berths 1-5).

Table 4.1 Turbidity Threshold Levels for Maintenance Dredging at the International Terminals during the Allowed In-Water Work Periods		
Turbidity Level (NTU)	July 1 – October 31	January 1 – January 31
Action Level (48 – hour average)	35	44
Stop Work Level (8-hour average)	135	144

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Compliance monitoring results will be compared to the turbidity thresholds presented in Table 4.1 to evaluate water quality compliance. In the event that natural background turbidity exceeds the action level or stop work level in Table 4.1, then these levels will be 10 percent above background turbidity in accordance with Oregon State water quality standard (OAR 340-041-0445) for turbidity for the Willamette Basin. An exceedance of the threshold occurs only if the average turbidity exceeds the action level for a consecutive 48-hour period or the stop work level for a contiguous 8-hour period and the monitoring supervisor identifies the dredging operation as the cause of elevated turbidity.

5.0 Water Quality Monitoring Schedule

Turbidity will be monitored visually approximately every 4 hours during dredging operations. If visible turbidity observations indicate a potential problem then the *in situ* compliance-monitoring schedule will be adjusted to sample sooner than the next scheduled monitoring event.

In situ compliance monitoring for turbidity will be conducted twice daily for 3 days (intensive monitoring), at the water quality monitoring station located 150 feet downstream from the project area. Compliance monitoring results will be compared to turbidity thresholds (shown in Table 4.1) and ambient concentrations.

If exceedances are measured, another round of compliance monitoring and ambient monitoring will be initiated to verify the exceedance and ODEQ will be notified. If turbidity is consistently found to be acceptable during subsequent "intensive" monitoring, monitoring will return to visual-only monitoring every 4 hours during dredging operations. Apparent visual exceedances will trigger a return to intensive monitoring (twice daily instrument monitoring)_until turbidity exceedances ceases. Visual-only monitoring every 4 hours would then resume.

6.0 Water Quality Monitoring Equipment and Methodology

Turbidity measurements will be collected using a turbidity meter. Prior to each use, the turbidity meter will be calibrated according to the manufacturer's instructions. When the interface screen shows no significant change in the readings, the probe will be considered calibrated and ready for monitoring. Turbidity readings will be measured at each of the three depths specified in Section 4.0. All water quality monitoring field data, as described in Section 8.0, will be documented in the Water Quality Monitoring Report.

To satisfy QA/QC procedures, all field analyses will be conducted in duplicate at least 10 percent of the time. A significant difference (± 3 percent) in the replicate analyses will result in a recalibration of the field instrument. All field analyses will be recorded in logbooks and will be traceable to the specific person conducting the calibration.

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7.0 Field Equipment Calibration and Preventative Maintenance

Field instruments will be properly operated, calibrated, and maintained by qualified personnel according to the manufacturer's guidelines and recommendations. Documentation of routine and special preventive maintenance and calibration information will be maintained in the appropriate field or laboratory logbook, and will be available upon request. Each maintenance and calibration logbook entry will include the date and initials of the individual performing the activity.

8.0 Documentation of Water Quality Monitoring Data

Field personnel will prepare daily field water quality monitoring reports detailing monitoring data collection activities and results. These field reports will include the following information:

- Depth of water at monitoring locations.
- Results of water quality monitoring instrumentation.
- Calibration sheets and notes for all daily instrument calibration.
- List of personnel on board vessel.
- Problems encountered that might affect data results.
- Weather at time of water quality monitoring.
- Date and time of exceedances, if any have occurred, and associated corrective actions.
- Station coordinates, including exact time and date of monitoring data documentation.

A Water Quality Monitoring Report will be prepared and submitted to ODEQ after maintenance dredging activities have been completed. This report will include:

- Depth of water at monitoring locations.
- Record of compliance and ambient monitoring results.
- Description of maintenance dredging activities occurring during water quality monitoring activities.
- Description of any monitoring results that exceeded compliance criteria including time and date of the exceedance.
- Description of corrective actions implemented to mitigate water quality impacts.
- Maps indicating water quality monitoring locations.
- Maps showing construction activity locations during water quality monitoring activities.

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9.0 Corrective Action and Notification

If compliance monitoring data indicates a turbidity exceedance of the water quality criteria at the compliance boundary, ODEQ will be notified immediately after the exceedance is confirmed and corrective actions will be evaluated. Corrective actions will include confirming that environmental buckets are properly functioning, modifying dredge procedures (such as changing dredge buckets, slowing or otherwise revising dredge rates, etc.) and/or modifying barge-dewatering procedures (e.g., replacing filter materials or increasing settling time). ODEQ will be informed of potential corrective actions.

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10.0 References

Oregon Department of Environmental Quality (ODEQ). Statewide Water Quality Management Plan. Beneficial Uses, Policies, Standards and Treatment Criteria for Oregon. OAR 340-041, Water Pollution.

Port of Portland. 2001. Water Quality Management Plan for Maintenance Dredging. August 31.

Ellis Ecological Services, Inc. 2001. Preliminary Assessment of Potential Effects on Salmonids Associated with Turbidity Caused by Dredging in the Columbia and Willamette Rivers. Memorandum prepared for the Port of Portland. August 30.

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Figures

